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NUMBER 48  
SPRING 1998

CATALOGUE NO.  
11-008-XPE

CANADIAN

# SOCIAL TRENDS

\$11 IN CANADA



DIVORCE □ FERTILITY INTENTIONS □ SENIORS ON THE MOVE



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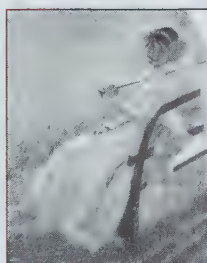
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### ON OUR COVER:

**Youth and Sunlight** (1913), oil on canvas, 148.0 x 114.4 cm. Collection: National Gallery of Canada, Ottawa.

### About the Artist:

**Marc-Aurèle de Foy Suzor-Coté** was born in Arthabaska, Quebec in 1869. He traveled to Paris in 1890 to study at the École des Beaux-Arts, and was made an Officer of the Academy by France in 1901. He became famous for his

bronze studies of *habitants* and of the Indians of Caughnawaga. He was elected an Associate of the Royal Canadian Academy of Arts in 1911 and a full member in 1914. He died in Daytona Beach, Florida in 1937.

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**Acknowledgements**  
A. BÉLANGER, N. DARCOVICH, G. WARD,  
D. PATON, L. RODRIGUES, E. SHIN, N. TURNER

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Indexed in the **Canadian Magazine Index**, **Public Affairs Information Service, Inc.** and available on-line in the **Canadian Business and Current Affairs Database**.

ISSN 0831-5698



# ***What influences people's plans to have children?***

**C**hanges in fertility have a profound effect on many aspects of Canadian life, including population growth, the demand for schools, housing, health care, jobs and pension funds. So, having information about the number of children people intend to have helps to identify future trends in the birth rate. In 1995, for example, nearly half of Canadians aged 20 to 39 intended to have two children and one-quarter expected to have three or more. Few young adults planned to remain childless or have only one child. But, many factors can affect whether or not people achieve their intentions.

*by Dave Dupuis*



This article uses data from the 1995 General Social Survey (GSS) to examine some of the factors that influence the fertility intentions of young adults aged 20 to 39.<sup>1</sup> Fertility intentions were measured by asking the following question: "What is the total number of children you intend to have, including those you have now and are currently expecting (if the respondent or respondent's spouse is pregnant)?" This measure of fertility intentions (total intended births) includes biological children only, and excludes adopted and step-children. Both men and women responded to this question.

**Marriage leads people to want more children** Despite the increasing prevalence of common-law unions, most unmarried young adults do expect to marry at some time.<sup>2</sup> And marriage had a substantial influence on fertility intentions. The 1995 GSS revealed that over three-quarters of unmarried Canadians in their twenties (including those in common-law unions) expected to marry, as did over 40% of those in their thirties. Singles who expected to marry intended to have (on average) about one more child than those who did not. People

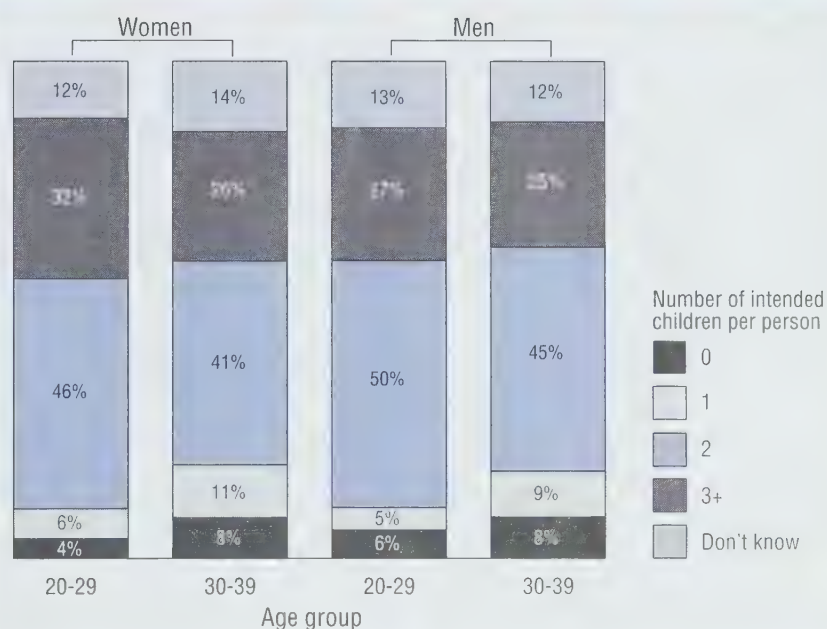
who were already married generally wanted slightly more children than those who expected to marry, this tendency was most marked among couples in their thirties.

The importance of matrimony to childbearing is supported by data on fertility rates. Although children born to unmarried couples are increasingly common

<sup>1</sup> The GSS covers people aged 15 and over living in private households in the ten provinces. Data were collected from 4,500 respondents aged 20 to 39, representing 9.5 million people.

<sup>2</sup> Some young people may be postponing marriage and childbearing for economic reasons. Over the last 15 years, wages for young men have stagnated and rapid technological change has lengthened the period that young people need to attend school to qualify for a well-paying job. René Morissette, "Declining earnings of young men," *Canadian Social Trends*, Autumn 1997.

### Few young adults intend to remain childless



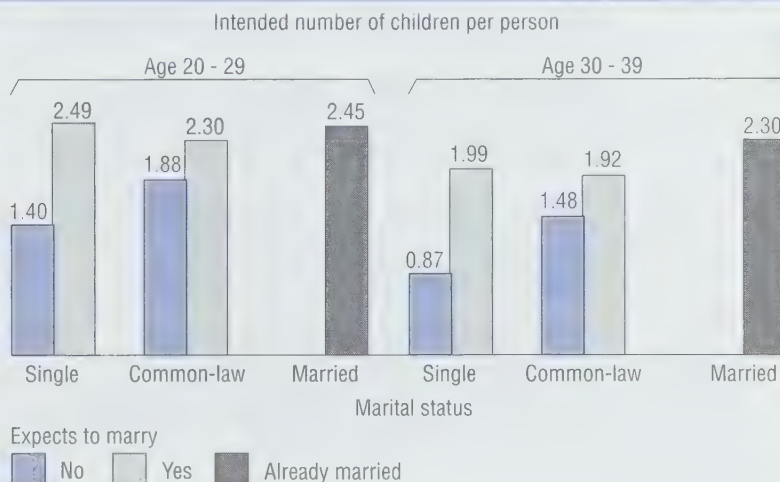
Source: Statistics Canada, 1995 General Social Survey.

On average, adults aged 30 to 39 intend to have fewer children than those aged 20 to 29

Age group	Total intended births	
	Women	Men
	(Average children per person)	
All ages	2.46	2.28
15-19	2.26	2.22
20-29	2.36	2.30
20-24	2.45	2.34
25-29	2.28	2.26
30-39	2.10	2.11
30-34	2.07	2.11
35-39	2.12	2.11
40-49	2.02	2.00
50+	2.98	2.57

Source: Statistics Canada, 1995 General Social Survey.

### The expectation of marriage contributed to higher birth intentions



Source: Statistics Canada, 1995 General Social Survey.

nearly two-thirds of live births still occur within marriage. Furthermore, the birth rate among married women is nearly double that of women who spent their entire reproductive life in a common-law union.<sup>3</sup>

**Family history influences fertility intentions of adult children** One might expect that a parent's divorce would influence an individual's attitudes toward childbearing; specifically, that divorce might produce negative attitudes toward marriage and family and reduce the desire for children.<sup>4</sup> But it seems that the effect of parental divorce on the fertility intentions of adult children dissipates over time. The 1995 GSS found that parental divorce did not affect the fertility intentions of people in their thirties, and affected people in their twenties only if the split had occurred when the child was more than 15 years old.

Parents may transfer childbearing attitudes and behaviour to their children.<sup>5</sup> Young adults who had many siblings wanted more children than young adults with few siblings. Those in their twenties with four or more siblings reported they expected to have an average of 2.54 children compared with 1.97 for those with no brothers or sisters. A similar

pattern was observed for those in their thirties, but the magnitude of the difference was smaller.

### Women and men with higher education have opposite views on fertility

While there is little difference in the intentions of women in their twenties, regardless of education, women in their thirties with a university degree intend to have fewer children than women with less education. With increased opportunities available to women with advanced education, many now pursue careers. Yet because women remain the primary caregivers of children, frequently interrupting their employment for childbirth and child care,<sup>6</sup> the costs associated with taking time out of the labour force may constrain or delay childbearing.

In contrast, men with high educational attainment intend to father more children than men with lower attainment. This finding probably reflects the fact that university-educated men tend to have well-paid, stable employment and are better able to afford to raise more children. The diverging fertility intentions of men and women, however, probably arise from the differing opportunity costs associated with childbirth and child care. Having children has a much smaller

impact on men's careers, which may explain why they want more children than women.

### Religiosity plays large role in plans to have children

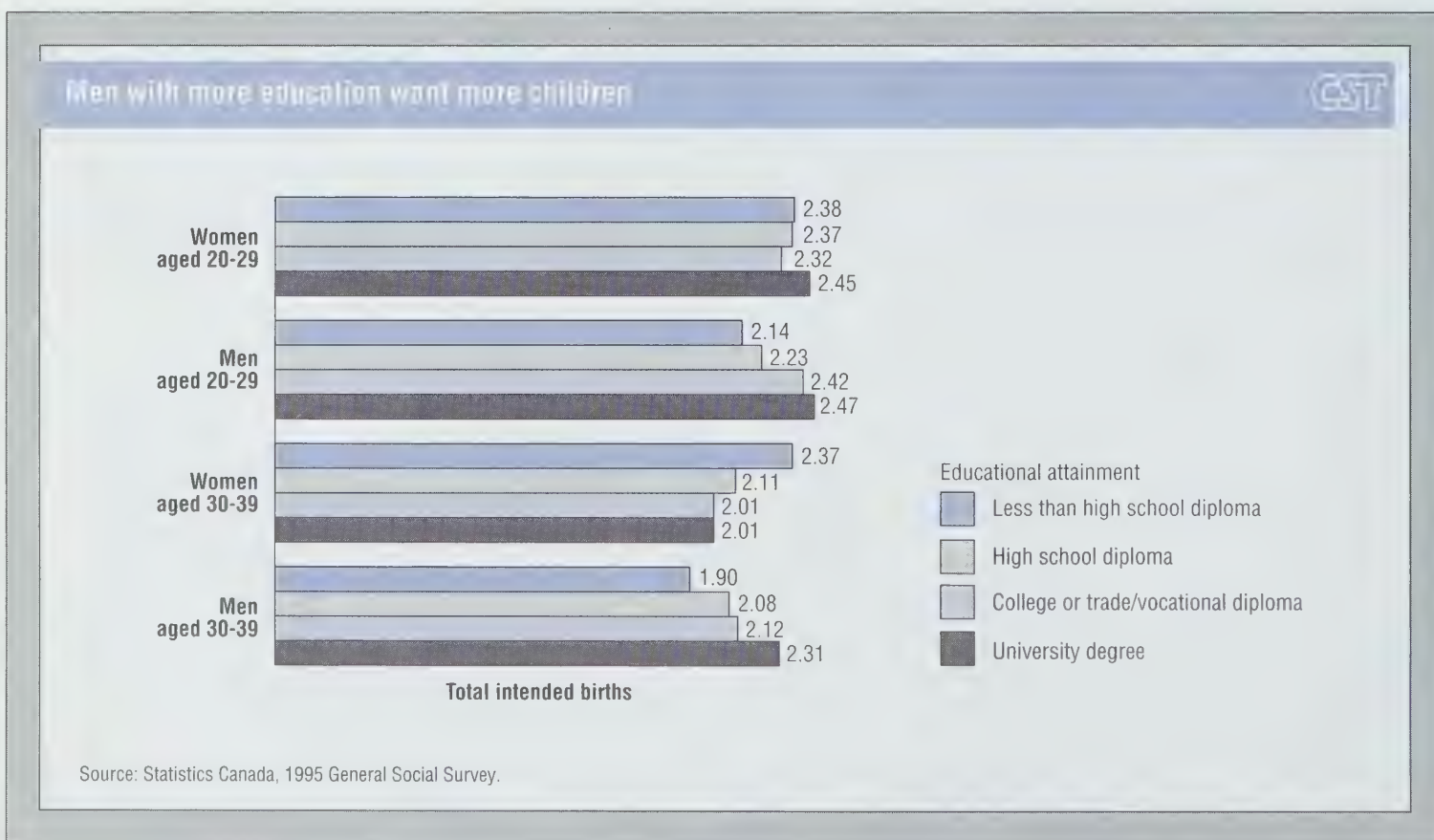
Most people describe themselves as belonging to a religious denomination. This affiliation seldom changes over a person's lifetime, but their religious commitment, as measured by attendance at religious services, may vary substantially from time to time. Religious affiliation and attendance at religious services (religiosity) influence the fertility intentions of young adults, especially those in their thirties. Adults aged 30 to 39 who reported no religion intended to have the smallest average number of children (1.76). People affiliated with other world religions (such as Eastern

<sup>3</sup> Statistics Canada, *Births and deaths, 1995*, Catalogue 84-210-XPB. Jean Dumas and Alain Bélanger, *Report on the demographic situation in Canada, 1996*, Catalogue no. 91-209-XPE.

<sup>4</sup> William G. Axinn and Arland Thornton, "The influence of parent's marital dissolutions on children's attitudes toward family formation," *Demography*, Vol. 33, no. 1, (February 1996): pp. 66-81.

<sup>5</sup> William G. Axinn, Marin E. Clarkberg, and Arland Thornton, "Family influences on family size preferences," *Demography*, Vol. 31, no. 1, (February 1994): pp. 65-79.

<sup>6</sup> Janet Fast and Moreno Da Pont, "Changes in women's work continuity," *Canadian Social Trends*, Autumn 1997.





Orthodox, Jewish and other non-Christian Eastern religions) reported the highest number of intended births. Furthermore, people in their thirties who attended religious services every week intended to have, on average, at least 0.5 more children than those who never attended religious services.

The higher fertility intentions of people who attend religious services regularly is not surprising since they are more likely than others to view marriage and family as very important to their happiness. For example, when women aged 20 to 29 were asked to rate the importance of having a child, using a scale from 0 ("not at all important") to 3 ("very important"),

those who attended religious services every week gave a high rating to having at least one child (average score 2.3). Scores were significantly lower for women who had not attended services in the last year (2.0) and women with no religion (1.9).<sup>7</sup> Young men with a strong religious commitment exhibited similar values and attitudes as women with strong religious commitment.

**Will intentions be realized?** The fertility intentions of people in their twenties must be viewed with caution. Intentions to have a certain number of children are not always fulfilled. Studies suggest that many couples make decisions about

fertility one birth at a time, and factors such as employment, education, changes in marital status or relationship dissolution, and infertility have important effects on intended births.<sup>8</sup>

People in their twenties may be less able to accurately take account of some of these future life events which can reduce birth intentions. This is illustrated by comparing the fertility intentions of women surveyed for the Canadian Fertility Survey in 1984<sup>9</sup> and the same cohorts interviewed 11 years later for the GSS. These snapshots reveal that fertility intentions of young women decrease as they grow older.

On the other hand, if the fertility intentions of people in their twenties were realized, it could have a large impact on the Canadian population: change of as little as 0.2 births per woman would produce a population increase of 1.4 million people by 2026.<sup>10</sup> Only time will tell if the higher fertility intentions of people in their twenties are realized.

<sup>7</sup> 1995 General Social Survey, unpublished data.

<sup>8</sup> J. Richard Udry, "Do couples make fertility plans one birth at a time?" *Demography*, Vol. 20, no. 2, (May 1983): pp. 117-128.

<sup>9</sup> The 1984 Canadian Fertility Survey was conducted by a consortium of researchers at several Canadian universities. For information, see T.R. Balakrishnan, Évelyne Lapierre-Adamcyk, and Karol J. Krótki, *Family and childbearing in Canada: A demographic analysis*. Toronto: University of Toronto Press, 1993; p. 21.

<sup>10</sup> M.V. George, Shirley Loh, Ravi B.P. Verma, "Impact of varying the component assumptions on projected total population and age structure in Canada," paper presented at the annual meetings of Population Association of America, Washington D.C., March 27-29, 1997.

**Dave Dupuis** is a master's student at the University of Victoria who spent a co-op work term with *Canadian Social Trends*.

**CST**

### Religiosity influences the average number of children 30- to 39-year-olds plan to have

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	Total	Did not attend religious services in the last year	Attended religious services weekly
(Average children per woman)			
<b>Men and Women</b>			
Total	2.10	1.91	2.58
No religion	1.76	1.76	...
Catholic	2.12	1.85	2.50
Protestant <sup>1</sup>	2.20	2.01	2.59
Other <sup>2</sup>	2.48	2.02	3.06

figures not applicable

<sup>1</sup> Includes United Church, Anglican, Presbyterian, Lutheran, Baptist and other Protestant.

<sup>2</sup> Includes Eastern Orthodox, Jewish, other non-Christian Eastern religions or other/unknown.

Source: Statistics Canada, 1995 General Social Survey.

### Young women's fertility intentions change as they grow older

**CST**

1984 Canadian Fertility Survey (CFS)		1995 General Social Survey (GSS)	
Age when interviewed in 1984	Total intended births (Children per woman)	Age when interviewed in 1995	Total intended births (Children per woman)
18-19	2.30	29-31	2.18
20-24	2.25	31-36	2.12
25-29	2.17	36-41	2.03
30-34	2.01	41-46	2.02
35-39	2.15	46-51	2.10
40-44	2.53	51-56	2.53
45-49	3.05	56-61	3.05

Source: T.R. Balakrishnan, E. Lapierre-Adamcyk and K. Krótki, *Family and Childbearing in Canada: A demographic analysis*, 1993, p. 23; and Statistics Canada, 1995 General Social Survey.

# Canadian Attitudes to Divorce

by Judith A. Frederick  
and Jason Hamel

"Oh, life is a glorious cycle of song, A medley of extemporanea;  
And love is a thing that can never go wrong;  
And I am Marie of Roumania."<sup>1</sup>

Over the past thirty years, Canada has undergone major demographic and socio-economic changes that have radically altered family life. In the past, if a man and woman wanted to live together, they got married and expected the marriage to blossom with the arrival of children. But the advent of reproductive freedom has changed women's lives dramatically and conjugal life has become more complicated. With the ability to control their fertility, women became better-educated, entered the labour force in droves and began to earn their own income. Women's increased independence has allowed marital partners greater freedom to dissolve an unhappy relationship. Responding to changing social realities, divorce laws eased and the divorce rate doubled in 25 years. In the

1990s, the social stigma surrounding divorce has virtually disappeared.<sup>2</sup>

Despite the prevalence of divorce, little is known about why some marriages succeed and others fail. But research has found that attitudes are among the strongest predictors of divorce.<sup>3</sup> Exploring the factors that influence attitudes may help us better understand our increasingly complex conjugal lives. This article examines a number of socio-demographic characteristics that affect Canadians' beliefs about the conditions that justify breaking up a marriage.

<sup>1</sup> Dorothy Parker, *The Quotable Woman*, Running Press Book Publishers, 1991, p.41.

<sup>2</sup> In this article, divorce includes the dissolution of both cohabiting and legally married couples.

<sup>3</sup> Don Swenson, "A Logit Model of the Probability of Divorce," *Journal of Divorce and Remarriage*, Vol. 25 (1/2), 1996, p.173.

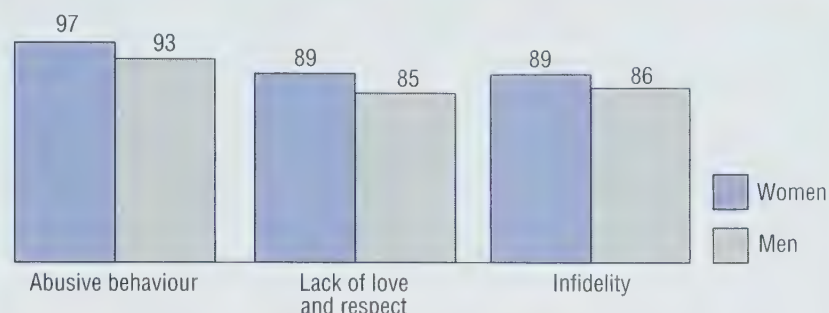


### Most Canadians agree abusive behaviour, infidelity and disrespect justify divorce

There was nearly unanimous agreement among Canadians aged 15 and over (95%) that abusive behaviour from a partner is sufficient reason to leave a marriage. Almost nine in ten also believed that an unfaithful partner or lack of love and respect are sufficient reasons to break up. All three generations — Elders, Boomers and Gen-Xers — expressed similarly strong opinions on these issues. Less solid support was apparent about a partner who drinks too much, but nearly three-quarters believed it is sufficient grounds for divorce. These four reasons constitute the fundamental beliefs that Canadians of each generation share

#### Women and men hold very similar views about the fundamental reasons that justify divorce

% agree would justify divorce



Source: Statistics Canada, 1995 General Social Survey.

## CANADIAN SOCIAL TRENDS BACKGROUNDER

### Data source and limitations

The 1995 General Social Survey (GSS) on family and social support collected data from nearly 11,000 Canadians aged 15 and over living in the ten provinces, excluding full-time residents of institutions. In addition to gathering a wide array of information about the respondent's family and marital history, the survey explored attitudes towards several family-oriented issues. One of the issues was marital dissolution; specifically, respondents were asked "... if you think the following reasons are sufficient for splitting up a marriage or common-law relationship."

The ten reasons presented fell into three general categories: fundamental issues such as abusive or disrespectful behaviour of a partner; experiential issues such as conflict over money, households chores and raising the children; and fertility issues such as inability to have children or to agree on the number of children to have. In a more personal vein, respondents were also asked if they themselves would stay in a union for the sake of their children.<sup>1</sup> The responses offer insight into the issues Canadians agree are justifiable grounds for divorce and those that are more contentious.

**Methodology** Certain variables can interact together and influence the results of the analysis. For example, since 57% of Canadians in their first common-law union are Gen-Xers, the attitudes they express may stem from their age rather than their marital history; the same could be said of people in their first marriage, almost 91% of whom are Boomers and Elders. To control for some of these interaction effects, a statistical technique called multiple classification analysis (MCA) has been applied to the data, so that the results presented in

this article show the effect of only the one variable, while holding other factors such as religiosity, province of residence and country of birth constant. For example, the first table in this article shows the effect of generation on opinions about divorce, holding constant marital history and other factors, while the second table shows the effect of marital history, holding constant generation and other factors. (Several other variables that did not significantly affect the results — e.g. number of children, education and labour force status — were excluded from the model.)

**The generation gap** This article adopts Michael Adams's definition of "generations" or age groups.<sup>2</sup> Adams divides the Canadian population into three categories: Elders (born before 1946), Boomers (born between 1946 and 1965) and Gen-Xers (born after 1965). Adams suggests that three factors largely determined the values of the Elders — gender, age and income — and notes that their society was fairly static and supportive of well-established institutions like marriage. The Boomers — more affluent, educated, traveled and informed — used their position in society to challenge these institutions and the values they represented. Meanwhile, the Gen-Xers — less affluent than their parents but with broader and more multidimensional horizons — consider these institutions and values less relevant than the two earlier generations.

<sup>1</sup> The 1995 GSS also asked respondents whether their own relationship was very happy, fairly happy or not too happy. Fewer than 2% reported that they were "not too happy." While social pressure may inhibit some respondents from reporting an unhappy union, it could be that many unhappy unions have already been dissolved.

<sup>2</sup> Adams, Michael, *Sex in the Snow: Canadian Social Values at the End of the Millennium*, Penguin Canada, 1997.



### Elders more likely than younger Canadians to agree with more reasons to divorce

CST

	Gen-Xers 15 - 29	Boomers 30 - 49	Elders 50 and over	Total
% of population aged 15 and over				
<b>Fundamental issues</b>				
Abusive behaviour from the partner	95	95	94	95
Unfaithful behaviour from the partner	89	85	89	88
Lack of love and respect from the partner	86	87	87	88
Partner drinks too much	68	73	80	74
<b>Experiential issues</b>				
Constant disagreement about how the family finances should be handled	28	40	49	40
Unsatisfactory sexual relationship with the partner	21	37	45	35
Unsatisfactory division of household tasks with the partner	12	16	21	17
Conflict about how the children are raised	14	17	21	17
<b>Fertility issues</b>				
Inability to have children with the partner	8	12	17	13
Disagreement about the number of children to have	3	6	11	7
Would stay for the children	44	39	52	43

Source: Statistics Canada, 1995 General Social Survey.

### Men are less likely to tolerate an unsatisfactory sexual relationship

CST

% agree justify divorce



Source: Statistics Canada, 1995 General Social Survey.

about grounds for divorce, and a strong positive correlation exists among them.

### Younger adults less likely to agree experiential issues are valid reasons to split

The real differences among the generations emerge with respect to experiential issues — that is, dealing with finances, sexual relationships, household chores and raising children. It appears that the more experience Canadians have dealing with these aspects of marital life, the less tolerant they become. Experiential issues were more often seen as grounds for divorce by Elders (61%) than either Boomers (55%) or Gen-Xers (49%).

About 40% of all Canadians aged 15 and over believed that constant disagreement about handling the family's finances is sufficient grounds for divorce, but very different results were observed among the generations. About one-third of Gen-Xers held that continual squabbling over money justifies divorce, while nearly half of Elders did. Perhaps with their greater likelihood of being a one-income family, Elders have stronger views about allocating the family's money. Women's and men's attitudes toward disagreements about money were quite similar.

Gen-Xers were also only half as likely as Elders to consider an unsatisfactory sex life sufficient reason to split up. This may reflect younger Canadians' relative lack of experience with the kind of problems that can develop in a sexual relationship over time. Men were more likely to agree that this issue justified leaving a marriage, especially in the older generations. Interestingly, responses to this question are highly correlated with the question about conflict over division of household labour.<sup>4</sup>

Few adults (17%) considered an unsatisfactory division of household tasks a valid reason for marital dissolution, but the level of agreement rose with each generation and Elders were almost twice as likely as Gen-Xers to concur. It was men rather than women (19% versus 14%) who most frequently agreed that this type of conflict justifies divorce; one might expect sharing housework to be a bigger issue among women, since they still retain primary responsibility for the household even when they are employed outside the home.<sup>5</sup>



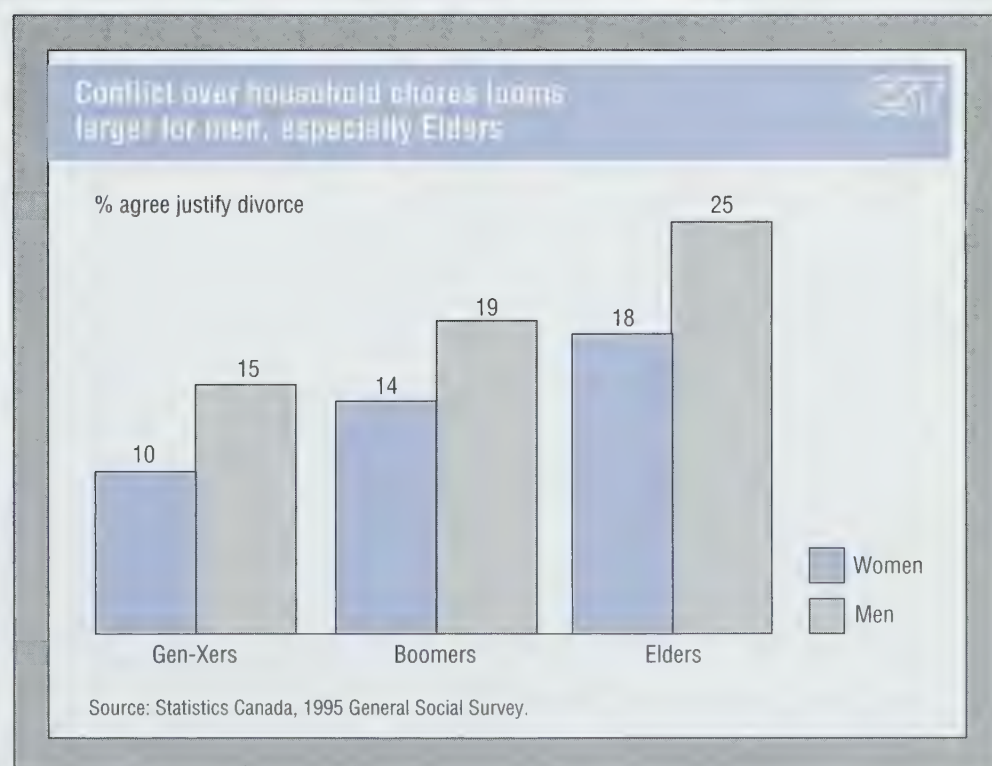


Only a small minority of Canadians (17%) considered conflict over raising children valid grounds for leaving a partner. But as with the other experiential issues, Elders were most likely to agree that arguing about the children was sufficient reason for divorce.

**Fertility issues not likely to justify marriage break-up...** Fewer people think that divorce is justified by infertility or the number of children to have than by conflict over the way the children are being raised. Only 13% of adults believed that inability to have children was a valid reason to end a marriage, while conflict

<sup>4</sup> Arlie Hochschild has noted that unresolved conflict over the sharing of household chores can lead to resentment in the bedroom; the 1995 GSS findings tend to support her theory. *The Second Shift*. New York: Viking (1989)

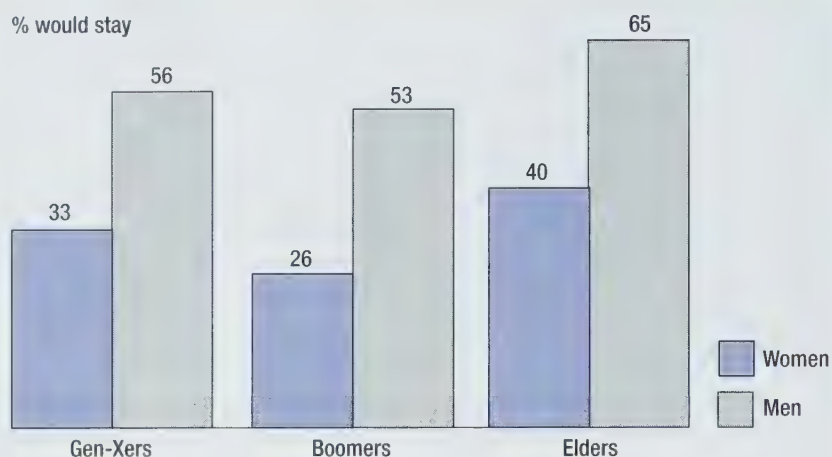
<sup>5</sup> Judith A. Frederick, *As Time Goes By: Time Use of Canadians*, Statistics Canada, Catalogue no. 89-544-XPE.



### Women were less likely to stay in a bad marriage for the sake of the children

CST

% would stay



Source: Statistics Canada, 1995 General Social Survey.

about the number of children to have won even less support (7%). There was no significant difference between women's and men's opinions. Nonetheless, a substantial difference is evident between generations: Elders were more than twice as likely as Gen-Xers to concur that conflict over fertility issues is grounds for divorce.

### ... but majority would not stay married for the kids' sake

The majority of Canadians would not stay in a bad marriage for the sake of their children. About 40% of adults said they would remain; Boomers, who are currently most likely to be faced with this issue, would be least likely to stay. Also, women were less inclined than men to want to hold the family together simply for the children's sake, with fewer than one-third of women reporting they would stay, compared with nearly 60% of the men.

### Percent of population aged 15 and over who agree ... is sufficient reason to split up a marriage or common-law relationship, by marital history

CST

	Total	Common-law		Married		Previously married		Single
		First	Second or subsequent	First	Second or subsequent	Widowed	Divorced/separated	
<b>Fundamental issues</b>								
% of population aged 15 and over								
Abusive behaviour from the partner	95	95	94	94	99	92	95	96
Unfaithful behaviour from the partner	88	91	86	86	89	83	87	90
Lack of love and respect from the partner	88	87	86	86	88	83	88	91
Partner drinks too much	74	76	79	71	81	72	77	77
<b>Experiential issues</b>								
Constant disagreement about how the family finances are handled	40	44	43	37	41	36	45	43
Unsatisfactory sexual relationship with the partner	35	44	36	33	32	32	38	39
Unsatisfactory division of household tasks with the partner	17	25	18	14	15	12	18	21
Conflict about how the children are raised	17	23	21	14	18	14	25	20
<b>Fertility issues</b>								
Inability to have children with the partner	13	17	13	11	11	16	14	14
Disagreement about the number of children to have	7	11	7	6	8	6	7	9
Would stay for the children	43	36	33	49	30	57	33	42

Note: A second or subsequent common-law union refers to individuals who had a previous relationship, either cohabitation or a legal marriage. A second or subsequent marriage refers to individuals who have been married before. If individuals living in a common-law union then married, they are included in the first marriage category.

Source: Statistics Canada, 1995 General Social Survey.



### Marital history colours attitudes to divorce

Of course, marital history also plays an important role in Canadians' views about divorce. People who have remained in their first marriage take a less liberal view than those who have not. Thus, Canadians in their first marriage (49% of adults in 1995) as well as widows and widowers (6%) were least likely to agree that any of the issues described justify breaking up a marriage. In contrast, individuals who are currently divorced or separated (7% of all adults), in a common-law union or a second marriage (14%) generally found divorce more acceptable.

Most probably reflecting their own experiences, separated or divorced people agreed more frequently than any other

marital group that most issues are valid grounds for divorce. On the other hand, individuals in their first marriage, as well as the widowed, held much less liberal views about divorce. But although the married and the widowed expressed similar opinions about fundamental and experiential issues, widows and widowers were more likely than married Canadians to believe that infertility is grounds for divorce. The importance that the widowed placed on children is reflected in the fact that they believed most strongly that partners should stay in an unhappy marriage for the sake of the children.

A relatively high proportion of individuals in their first common-law union also considered infertility a valid reason to separate, but they were also sympathetic

to conflict over sharing chores and an unsatisfactory sexual relationship. The attitudes of cohabitants were tangibly less traditional than those of married couples.

Singles held some of the most liberal views of divorce for fundamental reasons, but were more likely than other marital groups to view experiential issues or infertility as valid grounds for divorce. They appear to have a more idealized view of a relationship than others with more experience in living together.

**Summary** Almost all Canadians say they believe one should not tolerate an abusive or disrespectful partner; over one-third think constant arguments about money or an unsatisfactory sex life are grounds for divorce; less than one-fifth think conflict over raising the children, sharing household tasks or disagreements over fertility issues justify leaving a marriage. However, less than half of Canadians would stay in an unhappy relationship because of their children.

Without longitudinal studies, it is not possible to speak with authority about the extent to which values and attitudes toward divorce have been changing in recent years.

But the findings from the 1995 GSS may help to explain why the risk of divorce has increased while the characteristics of those most at risk have not changed significantly. Both age and experience appear to shape attitudes to divorce: people over 50 are much less tolerant of problems with a partner than Canadians under 30, and people in their second marriage accept a wider variety of reasons to dissolve a relationship than people in their first.

**Judith A. Frederick** is a senior analyst and **Jason Hamel** was a co-op student with Housing, Family and Social Statistics Division, Statistics Canada.

**CST**

## CANADIAN SOCIAL TRENDS BACKGROUNDER

### Divorce in the 1990s

Between 1971 and 1982, the annual divorce rate in Canada more than doubled, from 135 to 280 divorces per 100,000 population. For the next three years, divorce rates declined; then, following passage of the Divorce Act of 1985, divorce rates increased dramatically, peaking in 1987 at 362 divorces per 100,000 population. By about 1990, rates had leveled off, and rates have fluctuated relatively little since then.

However, a more precise way to examine the trend is to restrict the calculation to people who are eligible to divorce, that is, legally married couples. Viewed in this way, it can be seen that the marital divorce rate in 1995 (1,222 divorced per 100,000 legally married couples) was not much higher than in the early 1980s (1,180 in 1981). But while this 1.2% risk of divorcing in a given year is not very high, the risk of divorcing during the life of the marriage is much greater. For example, almost one in three couples (31%) who married in 1991 will eventually split up, if the 1991 divorce rates prevail.

The chance of divorcing increases rapidly during the first few years of marriage, peaking after five years and then declining gradually as the marriage continues. In light of this, it is not surprising that the divorce rate is highest for men and women in their twenties and early thirties, at about 2,000 divorced per 100,000 legally married couples per year. The divorce rate decreases with age after the mid-thirties, declining by age 75 to less than 85 divorced per 100,000 legally married couples. Men who divorce between the ages of 65 and 87 have been married an average of 27 years; women, 29 years. These averages, however, mask the fact that these seniors are most likely to have divorced either after a very long first marriage (of more than 40 years duration) or after a short second or subsequent marriage.

- For more information, see Jane F. Gentleman and Evelyn Park, "Divorce in the 1990s," *Health Reports*, Statistics Canada Catalogue 82-003-XPB, Vol. 9, no. 2.





# The Impact Of Family Structure On High School Completion

by Judith A. Frederick and Monica Boyd

Over the past several decades, there has been an unsettling increase in the number of Canadian children living in lone-parent families. According to the Census, just under 1.8 million children – almost one in five – lived in a lone-parent family in 1996, up 19% from 1991. Considerable research has established that children growing up in lone-parent families can be disadvantaged throughout their lives, compared to children from two-parent families. Not surprisingly, Canadians are concerned about the impact of this trend on current and future generations.



One of the principal reasons for this disadvantage is that children from lone-parent families are more likely to leave secondary school without finishing. High school graduation is a critical turning point in the life course, since drop-outs are the most vulnerable members of the labour force. This article uses the 1994 General Social Survey to examine the high school graduation rate of Canadian-born adults aged 20 to 44 who were living in a lone-parent family at age 15.<sup>1</sup> Immigrants are not included in the study because educational systems can

differ substantially between countries; and adolescent and older Canadians are not included because, for different reasons, they are less likely to have secondary school completion.

### Families with two biological parents most likely to produce high school graduates

Growing up in a family with both biological parents has definite advantages for both young women and young men. Among Canadian-born adults aged 20 to 44, more than 80% of those from two-parent biological families

completed high school, compared with about 71% of those from lone-parent families.<sup>2</sup> Those who lived in blended or step-parent families at age 15 also reported a 70% graduation rate, meaning they were just as likely as those from lone-parent families to have an incomplete education. The reasons for this remain unclear; it may be that the possible economic advantage of having a stepparent is offset by the stress created by another change in family structure.<sup>3</sup>

The GSS results also clearly suggest that parental education (and the concomitant implications for family income) plays an influential role in the children's educational outcomes. The best-case scenario for finishing high school is growing up with two biological parents who have a high school diploma or more.<sup>4</sup> Nearly all adults aged 20 to 44 (94%) from this type of family are also high school graduates. The rate drops for adults from two-parent biological families in which only one parent had a high school diploma (88%) and slips further for those from lone-parent families with high school completion (86%). However, the most telling story is in families where parents do not have high school graduation: only 71% of adults who lived with both biological parents at age 15, and 59% of those who lived with one parent, finished high school. These results suggest that while children may face significant disadvantages if their parents have a low level of education, the effect may be exacerbated in lone-parent families: the stress surrounding the family breakup, the virtually inevitable drop in family income, the unwillingness or inability of the absent parent to finance education, can all affect the academic success of children.

**Summary** The 1994 GSS findings add weight to the view that family structure

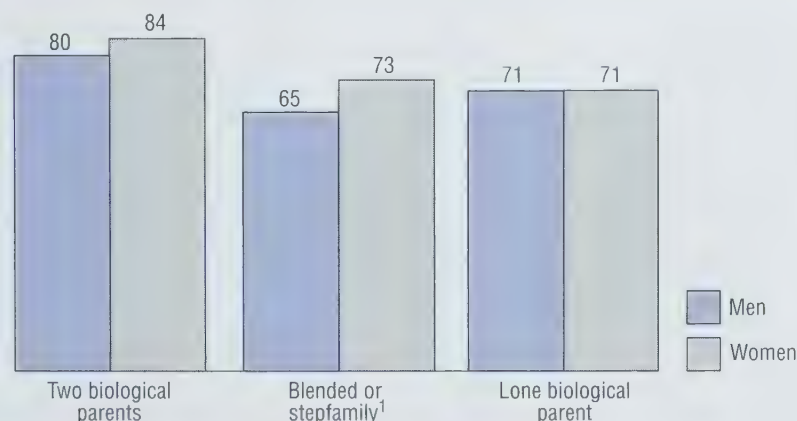
### Most Canadian-born adults aged 20 to 44 were living with both biological parents when they were 15 years old

Family Structure	Population ('000s)	(%)
<b>All families</b>	8,718	100
<b>Two-parent families</b>		
Biological mother and father	7,369	85
Biological mother and stepfather	259	3
Biological father and stepmother	81	1
Both step-parents	49	1
<b>Lone-parent families</b>		
Mother <sup>1</sup>	680	8
Father <sup>1</sup>	191	2
No parents <sup>1</sup>	88	1

<sup>1</sup> Includes non-biological guardians, such as adoptive parent or grandparent.  
Source: Statistics Canada, 1994 General Social Survey.

### Children from families with both biological parents are most likely to graduate from high school

% of Canadian-born adults aged 20-44



<sup>1</sup> One partner is the biological parent.  
Source: Statistics Canada, 1994 General Social Survey.

<sup>1</sup> The 1994 General Social Survey (GSS) on education, work and retirement collected data from nearly 11,000 Canadians aged 15 and over living in private households in the ten provinces. It also gathered information about the type of family the respondent was living in at the age of 15.

<sup>2</sup> Sample sizes for father-headed families are too small for meaningful analysis; therefore, all lone-parent families have been aggregated.

<sup>3</sup> Researchers are unsure whether blended and step-parent families should be considered similar to two-parent biological families (the income effect) or to lone-parent families (the stress effect).

<sup>4</sup> There are too few blended and stepparent families to include in the analysis related to parents' education.



### Why are children from lone-parent families less likely to graduate?

Researchers disagree about the reasons why different family structures produce different educational outcomes for the children. The dominant theories, however, relate the differences between children to the reduced income, lack of a role model and stress that are more common in lone-parent families.

One of the oldest explanations is the theory of household production, which argues that since lone-parent families have fewer resources, they have less time, money and energy to devote to the child's education. A variant on this is the theory of economic deprivation, in which low income is identified as the problem; although lone-parent families accounted for just under 15% of all families in Canada in 1996, they made up over one-half of all families below the low income cut-offs.<sup>1</sup> As well, some researchers claim that the stigma of low income may undermine the child's schooling.

A third group of hypotheses addresses the issue of the absent father. These theories posit that children need a male

role model in their lives to thrive. It argues that the family is the key institution for socializing young children and two parents can provide more attention, help and supervision to foster the necessary skills for educational success. Some researchers also suggest that the stress created by the conflict surrounding the breakup of the family, or the reconstitution into a blended family, subverts academic achievement.

And some analysts dispute the idea that family structure plays a role at all in the different outcomes of children from lone-parent compared with two-parent families. The no-effect hypothesis, for example, claims that the differences arise entirely from factors such as the education and occupation of parents.

<sup>1</sup> Sample sizes are too small to test whether respondents from lone-parent families left school in order to help the family financially; however, GSS data for all respondents show that the most common reasons were financial (26%) and preferring work to school (22%). Somewhat different results were reported by the 1991 School Leavers Survey: men dropped out because they preferred work to school (28%), while women most often cited boredom (22%). For further information, see Sid Gilbert and Bruce Orok, "School Leavers," *Canadian Social Trends*, Autumn 1993.

plays a significant role in determining whether a child will graduate from high school. The debate will continue over the cause-and-effect connections between

family structure and children's educational attainment, although many topics lend themselves to further research — the relationship with the parent or stepparent, the

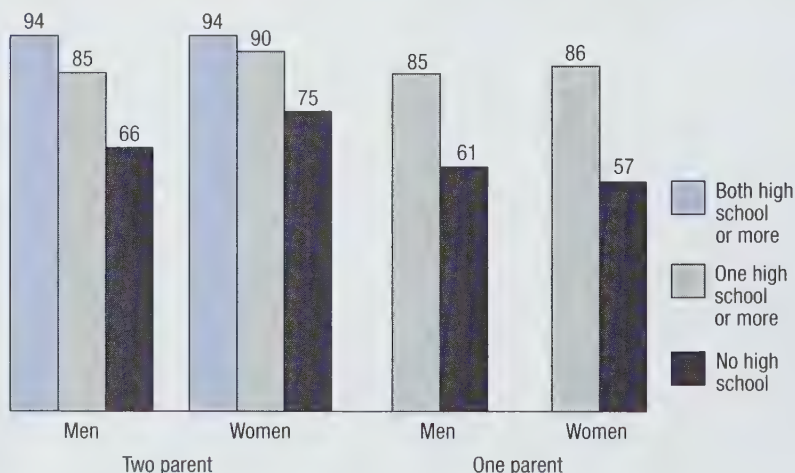
discipline and support offered by parents, and parental involvement with the child's schooling. Most of these issues can only be addressed by longitudinal surveys of child development outcomes, such as the National Longitudinal Survey of Children and Youth. In the meantime, researchers have offered recommendations for offsetting the disadvantages observed among children from lone-parent families, including programs that allow young adults to finish high school, providing affordable day care and after-school programs, and providing job training and skills upgrading to women.<sup>5</sup>

<sup>5</sup> For example, see Garry D. Sandefueer, Sara McLanahan, Roger A. Wojtkiewics, "The Effects of Parental Marital Status during Adolescence on High School Graduation," *Social Forces*, September 1992, Vol. 71, no. 1, pp. 103-121. Sheila Fitzgerald Krein, "Growing up in a Single Parent Family: The Effect on Education and Earnings of Young Men," *Family Relations*, 1986, Vol. 35, pp. 167.

**Judith A. Frederick** is a senior analyst with Housing, Family and Social Statistics Division, Statistics Canada and **Monica Boyd** is professor of sociology at Florida State University.

### Parents' education affects the likelihood that their children will complete high school

% of Canadian-born adults aged 20-44



Note: Parent is the biological parent.

Source: Statistics Canada, 1994 General Social Survey.

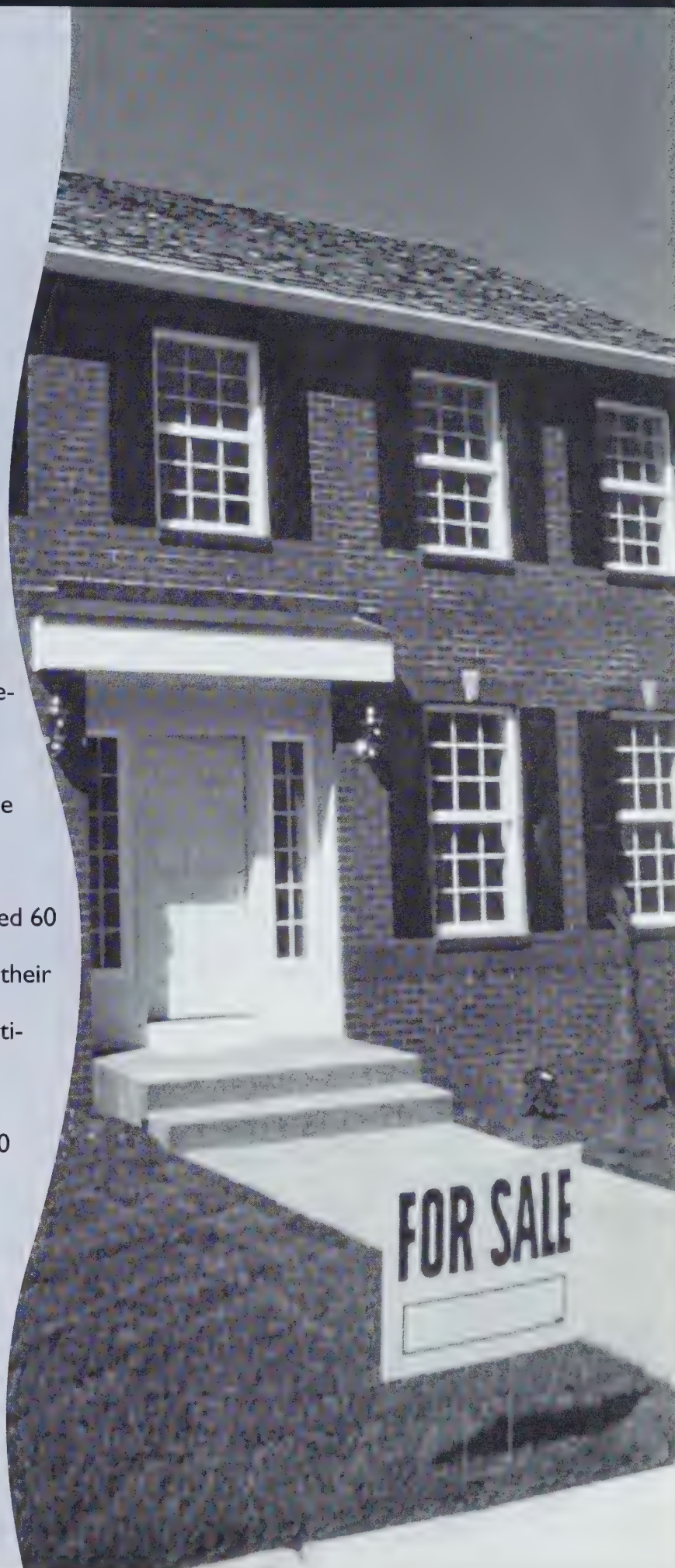


# OLDER CANADIANS ON THE MOVE

by Janet Che-Alford  
and Kathryn Stevenson

**A**lmost everyone agrees that it's not much fun packing up and moving out of their old home into a new one. But a vast number of Canadians move across the street, across the country or somewhere in between — almost 9.7 million of them over a five-year period.<sup>1</sup> Although these movers were most likely to be young or middle-aged adults, almost 938,000 Canadians aged 60 and over (23%) also changed their principal residence. In this article, the residential mobility patterns of Canadians aged 60 and over between 1990 and 1995 are described, with special emphasis on the reasons for moving.

<sup>1</sup> Almost half (46%) of the population aged 15 and over moved during the intercensal period 1986 to 1991. At the time of writing, the mobility data from the 1996 Census were not yet available; they will be released in April 1998.





### Most older movers stay near their old home

It takes most people about six months to settle into a new neighbourhood,<sup>2</sup> and for older people the process may take even longer. This may be one reason why most older Canadians do not relocate very far from their old neighbourhood. The 1995 General Social Survey (GSS) shows that the majority (76%) of Canadians aged 60 and over who had moved in the previous five years settled no more than 50 kilometres from their previous home, and many moved no more than 10 kilometres. Moves of more than 200 kilometres were not common: in 1995,

10% of older movers had undertaken to move such a long distance.

### Reasons for moving differ as people get older

Information about reasons for moving was gathered by the 1995 GSS and the 1991 Survey on Ageing and Independence (SAI). According to the GSS, the desire for a smaller home was most often why people aged 60 and over had moved in the previous five years; this reason was cited by 19% of older movers. This finding

<sup>2</sup> Audrey T. McCollum, "The Trauma of Moving: Psychological Issues for Women." Newbury Park: Sage Publications, 1990.

## CANADIAN SOCIAL TRENDS BACKGROUNDER

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### Many sources of data

This article examines the characteristics of Canadians aged 60 years and over living in the ten provinces who moved from one principal private residence to another at some time in the previous five years. The population excludes persons who moved out of the country permanently,<sup>1</sup> as well as those who moved into an institution such as a nursing home or chronic care home. Although the Census of Population provides coverage of all provinces and territories, the household surveys do not, so residents in the Yukon and the Northwest Territories were also excluded from the analysis.

Data on the extent of residential mobility were captured by the 1986 and 1991 censuses of population, while information on the reasons for moving was obtained from the 1995 General Social Survey (GSS) and the 1991 Survey on Ageing and Independence (SAI). Data on factors contributing to quality of life and dwelling characteristics were also drawn from the SAI; while the 1995 Household Income, Facilities and Equipment Database (HIFE) provided information on change in tenure.

<sup>1</sup> "Snowbirds" are included in the target population if they continued to report that their principal residence is in Canada.

### Over one in five Canadians aged 60 and over have changed their residence in the previous five years<sup>1</sup>

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Age group	Number of movers		Mobility rates	
	1981-86 ('000)	1986-91	1981-86 (%)	1986-91
20 - 59	7,027	7,977	50	53
60 and over	804	938	22	23
60 - 69	473	544	23	25
70 - 79	249	292	21	22
80 and over	81	102	20	21

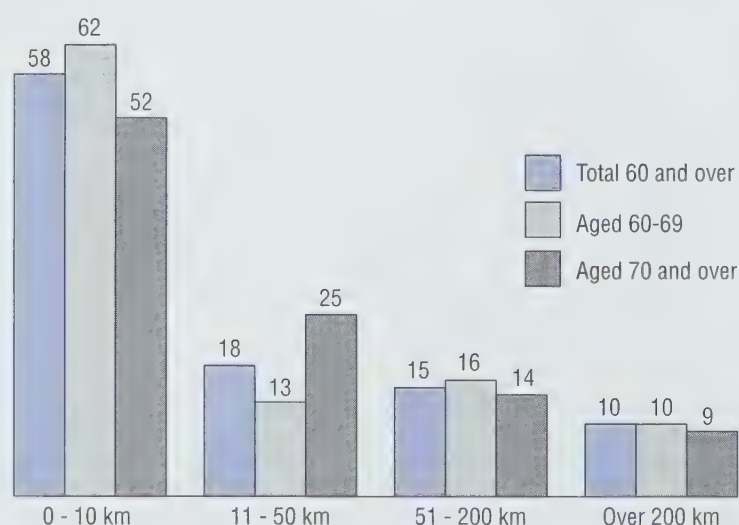
<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: Statistics Canada, 1986 and 1991 Censuses of Population.

### Most older Canadians who move travel only a short distance

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% who moved in previous 5 years



Source: Statistics Canada, 1995 General Social Survey.



implies that older people move to smaller accommodation in response to children leaving home or the desire for a home that requires less work to maintain.

Among people in their sixties, the second most frequently cited reason for having relocated in the previous five years was to purchase or build a home, while movers over 70 wanted to be close to family. The third most common reason was cited by

movers in both age groups — they had wanted to relocate to a better neighbourhood. As well, almost one in ten movers in their seventies or more reported that they were now living in a seniors' residence,<sup>3</sup> suggesting that they had wanted a change of lifestyle.

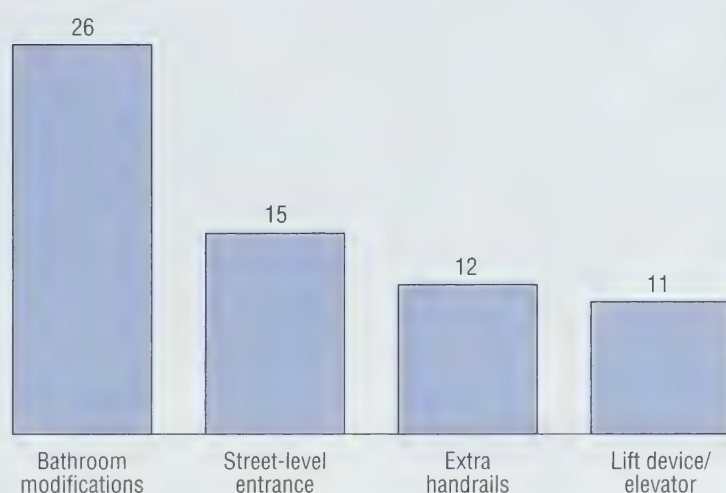
The reasons for moving were ranked somewhat differently by the 1991 SAI, mainly because the wording of the

questions was slightly different. Nonetheless, as with the 1995 GSS, housing issues dominated, with the size of the house being the most common response in each age group. Retirement ranked second for movers aged 60 to 69, while those aged 70 and over reported they had moved due to a decline in health. On the other hand, almost as many movers aged 70 and over had wanted access to more recreation and leisure activities, reflecting the fact that many senior citizens are still active and involved in the community.

While people may enjoy the privacy, security and stability of owning their home, they may decide to jettison the demands of its upkeep. Some older Canadians sell their homes as they become empty-nesters, seek the companionship of others their own age, adjust to a fixed income or become concerned about their health. According to the 1995 Household Income, Facilities and Equipment Database (HIFE), 14% of Canadians aged 60 and over who had moved in the previous five years switched from owning to renting. This shift was more common among more elderly movers, at 17% for those aged 70 and over compared with 10% among those in their sixties.

### Older movers with activity limitations often choose a home with special features

% with activity limitations who moved in previous five years



Source: Statistics Canada, 1991 Survey of Ageing and Independence.

### Older Canadians most often moved because of the size of their home

	Age group		
	Total 60 and over (% who moved in previous 5 years)	60-69	70 and over
<b>In 1995 (GSS)</b>			
Smaller home	19	18	21
Better neighbourhood	14	15	14
Purchase/build a home	12	16	--
Closer to family	10	--	16
Move to seniors' residence	5	--	9
<b>In 1991 (SAI)</b>			
House too big/small	26	25	28
Retirement of self/spouse	17	21	--
Decline in health	15	12	18
More recreation/leisure activities	10	--	14

-- Sample too small to release.

Source: Statistics Canada, 1991 Survey of Ageing and Independence and 1995 General Social Survey.

### One-third of older movers with activity limitations choose new homes with special features

In 1991, 1.2 million Canadians aged 60 and over had activity limitations such as being unable to walk three city blocks without resting, to dress themselves, or to use the toilet without assistance.<sup>4</sup> About 270,000 of them (22%) had moved in the previous five years, with over one-third (98,600) relocating to new homes with special health features. The most common adaptation was bathroom modifications (26% of all older movers with activity limitations), followed by a street-level entrance, extra handrails and a lift device. With advancing age, the demand for special adaptations to the home increases.

<sup>3</sup> Senior's residences refer to private dwellings (for example, apartment or condominium complexes) specially designed to meet the needs of older people. These needs can include everything from being within easy walking distance of a mall or golf course, to providing housekeeping services.

<sup>4</sup> Activity limitation refers to any illness, physical condition or health problem existing for more than six months that limits the kind or amount of activity in which a person can engage. The Survey of Ageing and Independence estimated that Canadians with activity limitations accounted for 31% of persons aged 60 and over in 1991.



**Summary** A large number of Canadians aged 60 and over have changed their place of residence in recent years (23% between 1986 and 1991). They moved for many of the same reasons that younger people do: because their house no longer "fits;" they want to live in a better neighbourhood; they would like to be closer to their family. However, the older the

person at the time of the move, the more likely their reasons were influenced by the desire for social support, whether to be closer to family or to live in a seniors' residence.

Given the rising proportion of older households,<sup>5</sup> older Canadians on the move may present a considerable challenge to the housing industry. The fact

that a substantial share of older movers seek smaller homes is significant. If the trend persists, the supply of larger houses available to younger families should increase, leading to better use of the housing stock in some communities. At the same time, there may be a surge in demand for other types of housing. Innovative housing options and technology will help older Canadians, especially those with activity limitations, to remain in their own homes as they age. An increasing number of alternatives, such as seniors' residences and sheltered housing, are also becoming available for seniors who want housing that is designed to meet their needs for a low-maintenance home, health care or convenient access to recreation and leisure activities.

<sup>5</sup> The percentage of households aged 55 years and over is expected to increase from 32% (3.3 million) in 1991 to almost 43% (5.6 million) in 2011. Roger Lewis, *The Long Term Housing Outlook, Household Growth in Canada and the Provinces, 1991-2016*. Canada Mortgage and Housing Corporation, Catalogue no. NH15-154/2016E, 1997.

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### Movers aged 70 and over were more likely to exchange home ownership for tenancy

	Age group		
	Total 60 and over (% who moved in previous 5 years)	60-69	70 and over
<b>No change</b>			
Rent to rent	41	38	45
Own to own	32	39	26
<b>Change</b>			
Rent to own	13	14	12
Own to rent	14	10	17
<b>Total<sup>1</sup></b>			
Own	45	52	38
Rent	55	48	62

<sup>1</sup> Excludes persons who did not maintain their households five years ago.

Source: Statistics Canada, Household Income, Facilities and Equipment Database, 1995.

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# Breast Cancer and Mammography

*by Leslie A. Gaudette,  
Jane F. Gentleman and Judy Lee*

Breast cancer is by far the leading form of cancer diagnosed in Canadian women, accounting for about 30% of all newly reported cancers.

Approximately one woman in nine can expect to develop breast cancer during her lifetime; about one in 25 will die of it. Although a number of risk factors for breast cancer have been identified, few lend themselves to preventive action. However, early detection of tumours can help control the impact of the disease. Recent Canadian data confirm a promising trend: the mortality rate is falling. This article briefly surveys trends in breast cancer incidence and mortality rates for women in different age groups, and examines women's use of mammography to screen for breast disease.<sup>1</sup>

<sup>1</sup> Men can get breast cancer too, but its occurrence is rare. In 1991, one case of breast cancer was diagnosed in men for about every 140 cases diagnosed in women.



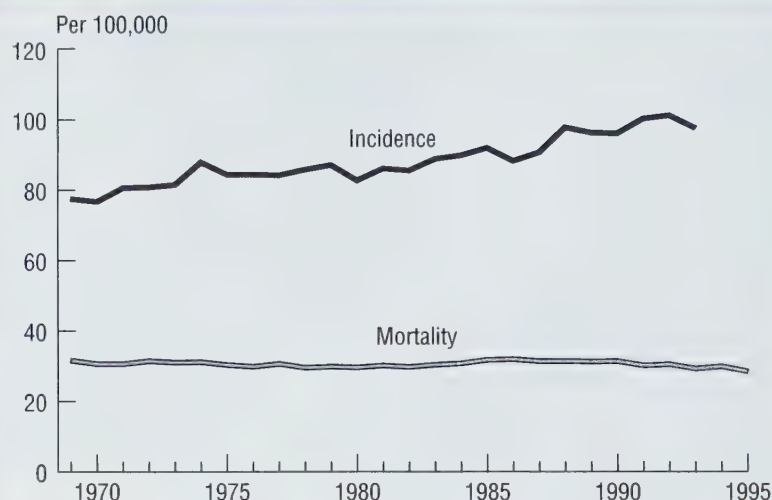
### Incidence rates stable for younger women

**women** Over 80,000 Canadian women alive today have been diagnosed with breast cancer. Although most common among older women, breast cancer can also strike women at the peak of their work and family responsibilities. It is the leading cause of death for women aged 35 to 49. While some people have expressed concern that it is becoming more common among women aged 40 to 49, the growth in numbers of new cases can be entirely explained by the movement of baby-boomers into their forties during the 1990s. When changes in the size of the population aged 40 to 49 are accounted for, incidence rates for breast cancer have actually remained fairly stable for younger women, at about 130 per 100,000 women aged 40 to 49.

On the other hand, the rate of new cases diagnosed in women aged 50 to 79 has increased considerably, and is most

### Breast cancer incidence has been increasing but mortality shows slow decline

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Note: Rates are age-standardized to the 1991 Canadian population adjusted for net census undercoverage. Source: Canadian Cancer Registry, National Cancer Incidence Reporting System, and Canadian Vital Statistics Data Base.

## CANADIAN SOCIAL TRENDS BACKGROUNDER

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### Data source and definitions

This article is adapted from four articles recently published in the quarterly Statistics Canada journal *Health Reports*. The analysis uses both administrative and household survey data drawn from a number of sources. The analysis of trends in incidence and mortality uses data collected by the Canadian Cancer Registry (1992 onwards), the National Cancer Incidence Reporting System (1969 to 1991), and the Canadian Vital Statistics Data Base (1969 to 1995). These administrative databases are maintained by the Health Statistics Division of Statistics Canada. Rates were age-standardized to the 1991 Canadian population to account for changes in the age structure of the population over time.

Administrative data on the annual number of mammograms provided to Canadian women were obtained from departments of health and provincial and territorial breast screening programs. Information about women's responses to questions about their mammography history were collected by the 1994-95 National Population Health Survey (NPHS). In asking women about their mammography history, it did not distinguish between mammograms received in organized breast screening programs and those received from other sources. The analysis focuses mainly on women aged 50 to 69 (2,111 respondents, representing about 2.6 million women).

**Mammogram** — a safe, low-dose X-ray of the breast that uses a special technique to find tumours at an early stage.

**Mammography** is used for two purposes:

*Screening* — to detect tumours in the early stages of development. Breast screening may be provided through organized provincial programs at no cost to women in the target age group (50 to 69), or through the fee-for-service system to women of all ages.

*Diagnostic assessment* — to assist in the diagnosis of suspected or existing breast problems. Diagnostic mammograms are provided only through the fee-for-service system, where physician referrals are required.

For more information, see:

- Gaudette, Leslie A., Carol Silberberger, Chris A. Altmayer and Ru-Nie Gao, "Trends in Breast Cancer Incidence and Mortality," *Health Reports*, Statistics Canada Catalogue 82-003-XPB, Vol. 8, no. 2; pp. 29-37.
- Gaudette, Leslie A., Chris A. Altmayer, Karla M.P. Nobrega, and Judy Lee, "Trends in mammography utilization, 1981 to 1994," *Health Reports*, Vol. 8, no. 3; pp. 17-25.
- Gentleman, Jane F. and Judy Lee, "Who Doesn't Get a Mammogram?", *Health Reports*, Vol. 9, no. 1; pp. 19-28.
- Gaudette, Leslie A., Ru-Nie Gao, Marek Wysocki and François Nault, "Update on breast Cancer Mortality," *Health Reports*, Vol. 9, no. 1; pp. 31-34.



likely due to women's increasing use of screening mammography.

**Mortality rates declining** Between 1969 and 1995, the annual number of deaths due to breast cancer almost doubled from 2,750 to 4,925. Throughout the 1970s and 1980s, however, the age-standardized mortality rate was fairly stable, at 30 to 32 per 100,000 women. Then it began to drop: by 1995, the mortality rate was 28.4 deaths per 100,000 women, the lowest rate reported since 1950. This decline is not dramatic, but it is statistically significant.

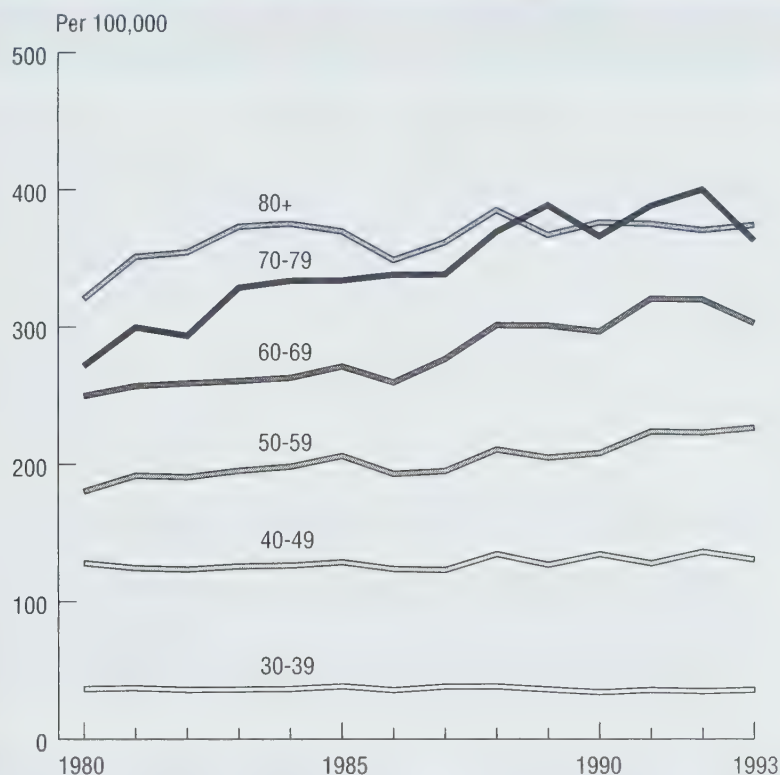
Furthermore, for people concerned that breast cancer is becoming more common among younger women, the mortality rate declined for all women under age 70. Some of this was due to the appreciable decline in rates for women in their sixties, and may be partly explained by their reproductive experiences: this cohort became mothers at a younger age than did earlier cohorts, and a younger age at first childbirth is associated with lower rates of breast cancer. Declines in mortality may also be caused by earlier detection of tumours through mammography or the use of more effective treatments, particularly for cancers diagnosed at an early stage.

**A favourable survival rate** Survival rates for breast cancer are more favourable than those for many other forms of cancer. According to data from the Alberta and Saskatchewan cancer registries, almost 70% of women with breast cancer can expect to live for at least five more years after being diagnosed, and about 50% will live for at least another 10 years. However, survival rates vary considerably by age; younger women are more likely to survive for at least 10 years, partly because older women are more likely to die from other causes. Also, while survival rates for most types of cancer stabilize after five years, those for breast cancer do not; instead, they continue to fall. This means that for many years after diagnosis, constant vigilance is needed to monitor for the recurrence of the disease.

**Can breast cancer be controlled with earlier detection?** Surviving breast cancer also depends greatly on the stage the cancer has reached at the time of

### Incidence of breast cancer has risen sharply among women aged 50-79

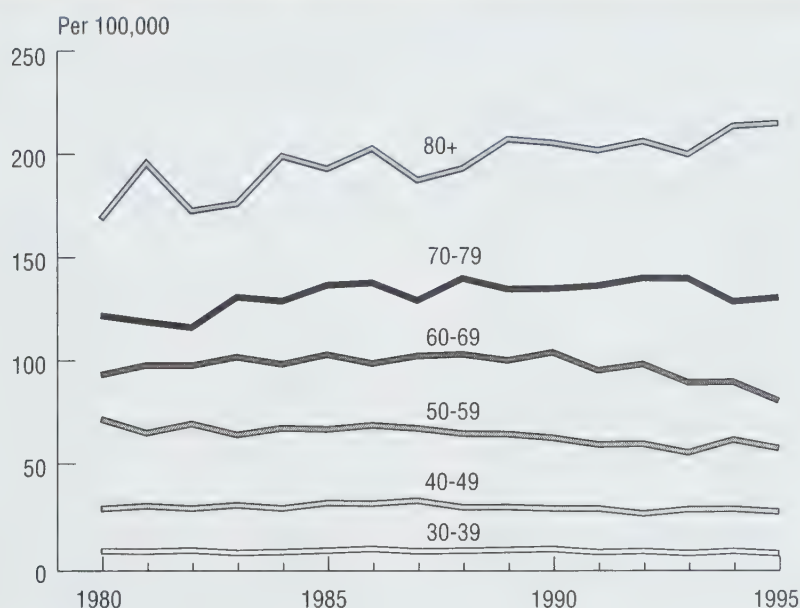
CST



Source: Canadian Cancer Registry and National Cancer Incidence Reporting System.

### Breast cancer mortality rates are declining among all women under age 70

CST



Source: Canadian Vital Statistics Data Base.



### Risk factors

Over the past 50 years, many studies have attempted to determine the factors associated with a higher risk of developing breast cancer. Factors identified by these studies as presenting a moderate to high relative risk for breast cancer include age, country of birth, family history of breast cancer, and biopsy-confirmed benign proliferative breast disease; factors associated with minor relative risk include reproductive history and lifestyle.

In many studies, increased risk is linked to what could be called hormonal factors — such as use of oral contraceptives, estrogen replacement therapy and the number of children born — but the level of association is still uncertain. Prolonged breast feeding, which has been shown in a number of populations to reduce risk, is thought to explain at least part of the low incidence of breast cancer among Inuit women. Diet has long been thought to be important, although a strong association between breast cancer and specific dietary components has yet to be confirmed. Yet despite the work done to identify possible causes of breast cancer, only about half of new cases can be explained by known risk factors.

#### Risk factors for breast cancer in women

	High-risk	Low-risk
<b>High relative risk</b>		
Age	Old	Young
Country of birth	North America, Northern Europe	Asia, Africa
Family history (mother and sister with breast cancer)	Yes	No
<b>Moderate relative risk</b>		
History of cancer in one breast	Yes	No
Family history (mother or sister with breast cancer)	Yes	No
Biopsy – confirmed benign proliferative disease	Yes	No
Chest X-ray (moderate to high doses)	Yes	No
<b>Minor relative risk</b>		
Socioeconomic status	High	Low
Marital status	Never-married	Ever-married
Place of residence	Urban	Rural
Age at menarche (first menstruation)	Under 12	15 or over
Age at first full-term pregnancy	30 or over	Under 20
Age at menopause	55 or over	Under 45
<b>Obesity</b>		
Breast cancer at age 50 or more	Obese	Thin
Breast cancer at less than age 50	Thin	Obese

Source: Adapted from J.L. Kelsey, "Breast cancer epidemiology: Summary and future directions." *Epidemiologic Reviews* 1993; Vol. 15, no 1; pp. 256-263.

diagnosis. Generally speaking, when the cancer is confined to the breast and is less than 2 cm in size (Stage I), women survive far longer than when the tumour has metastasized to other organs (Stage IV). This is why early detection of tumours can extend life, and why mammography is an important element in such a strategy. Finding tumours when they are still small, in conjunction with advances in treatment, affords some hope of improving survival rates. Because mammographic screening offers one of the best chances of defeating breast cancer at this time, the Canadian Cancer Society recommends that women aged 50 to 69 have a mammogram every two years.

The number of mammograms performed in Canada every year climbed rapidly from 250,000 in 1985 to 1.3 million in 1991, and stabilized at 1.4 million in 1994. The sharp upturn between 1985 and 1991 largely reflects increases in the number of mammograms performed to screen for breast cancer. (For example, in 1994-95, 80% of women aged 40 to 79 reported that their last mammogram was a "check-up," while 17% had had one because of an existing "breast problem," such as a palpable lump.) The numbers reported in the 1990s are relatively stable partly because governments introduced breast screening programs targeted at women aged 50 to 69, and partly because women may have begun to receive mammograms every two years rather than annually.

**Majority of women over 40 have had at least one mammogram** As the increase in the annual number of mammograms indicates, a growing number of Canadian women have had the procedure. According to the 1994-95 National Population Health Survey (NPHS), 64% of women aged 40 and over had had at least one mammogram in their lives, with the highest lifetime rates reported by women in their fifties (74%) and sixties (71%), the age groups targeted by breast screening programs. This was up substantially from 58% and 51%, respectively, as reported in the 1990 Health Promotion Survey.

A number of different factors are related to the likelihood that a woman in the target age group has had at least one mammogram in her life; these factors include income, education, place of



residence (urban or rural), physician advice and immigrant status. A multi-variate analysis of odds ratios helps to identify characteristics that are associated with mammography utilization.

Having a mammogram is associated to some extent with the availability of a coordinated, organized breast screening program. For example, the odds that women aged 50 to 69 had had a mammogram were low in Newfoundland, New Brunswick and Manitoba (provinces without an organized breast screening program), compared with Saskatchewan and British Columbia (the two provinces with the longest-running breast screening programs). Contact with the medical system for one reason or another also had a considerable impact: women who had seen a doctor in the previous year had much higher odds of having used mammographic screening, as did those who had cancer of any kind.

Married women (including common-law) also had higher odds of ever having had a mammogram compared with women who had never been married. Women whose primary activity was working for pay had significantly higher odds than women who were caregivers or retired; similarly, university or college graduates had higher odds than women without high school completion. Interestingly, household income was not significantly associated with a woman ever having had a mammogram, perhaps reflecting the universal accessibility of health care in Canada.

Place of birth is linked with ever having had a mammogram. Women who had emigrated from countries where breast cancer rates are considerably lower than in Canada — Asia, South and Central America, the Caribbean and Africa — had significantly lower mammography odds than either Canadian-born women, or women who had emigrated from the United States, Australia or northern Europe.

#### Who has recently had a mammogram?

Whether women who had had a mammogram complied completely with the recommendation for women aged 50 to 69 to have a screening mammogram every two years, depended on most of the same factors associated with whether they had had a mammogram at all. Among women

#### Almost two-thirds of women aged 40 and over have had a mammogram

	Age group					
	Total 40 and over	40-49	50-59	60-69 %	70-79	80 and over
<b>Canada</b>	<b>64</b>	<b>59</b>	<b>74</b>	<b>71</b>	<b>59</b>	<b>40</b>
Newfoundland	43	48	52	--	--	--
Prince Edward Island	58	50	76	71	--	--
Nova Scotia	49	47	54	57	--	--
New Brunswick	57	57	75	50	38	--
Quebec	67	66	81	67	57	--
Ontario	63	56	71	77	61	40
Manitoba	58	52	67	64	66	--
Saskatchewan	65	52	83	81	57	--
Alberta	65	55	71	83	67	--
British Columbia	69	66	82	70	64	--

-- Sample too small to be released.

Source: Statistics Canada, National Population Health Survey, 1994-95.

#### CANADIAN SOCIAL TRENDS BACKGROUNDER

##### Across Canada

The incidence of breast cancer has traditionally been higher in the western provinces and lower in the eastern provinces. In recent years, incidence rates have begun to converge, although they are still relatively high in British Columbia, Manitoba, Saskatchewan and Nova Scotia. The rates now reported in the provinces east of Ontario are relatively higher than they have historically been, perhaps partly because of the improved methods now used to register new cases. For example, some women develop more than one primary breast cancer, and various provincial cancer registries may use different rules to count these multiple primaries. On the other hand, changing fertility patterns and differing rates of implementation of breast screening mammography programs may contribute to provincial variations in incidence rates.

#### Breast cancer incidence rates and mortality rates vary by province and territory<sup>1</sup>

	Incidence rate (1989-1991) Per 100,000 women	Mortality rate (1991-1993)
<b>Canada</b>	<b>97.6</b>	<b>29.9</b>
Newfoundland	80.0*	29.1
Prince Edward Island	102.2	25.4
Nova Scotia	102.3*	32.9*
New Brunswick	95.1	29.0
Quebec	91.2*	31.6*
Ontario	98.1	30.6*
Manitoba	104.7*	27.5*
Saskatchewan	102.7*	27.0*
Alberta	97.7	29.9
British Columbia	106.8*	26.0*
Yukon	68.8	18.8
Northwest Territories	67.1*	37.1

\* Statistically significant difference from national rate.

<sup>1</sup> Rates are age-standardized to the 1991 Canadian population adjusted for net census undercoverage.

Source: Statistics Canada, Health Statistics Division.



who had ever had a mammogram, the odds of compliance with the Canadian Cancer Society recommendation were highest for married women, women in the paid workforce, those with a college or

university education, and those who had recently visited a doctor.

**Summary** Breast cancer is one of the most serious health concerns of Canadian

women. The incidence rate for this disease has not changed for women under 50, while it has risen for women aged 50 to 79. By contrast, in 1995, the Canadian breast cancer mortality rate was at its lowest point since 1950, the result of declining mortality rates for women in all age groups under age 70.

Mammography is an important contributor to the increased diagnosis of breast cancer, but the crucial question is whether earlier detection will affect breast cancer mortality rates over the long term. Because the decline in the breast cancer mortality rate has occurred so soon after the increase in screening mammography, it is unlikely that screening alone is behind the decline. The earlier diagnoses achieved with mammography may be playing a role, together with treatment advances and fertility patterns, as seen in the United States. In Canada, the most rapidly falling mortality rates are recorded for the two provinces (British Columbia and Saskatchewan) with the most extensive breast screening programs and among the highest mammography rates. Continued monitoring and analysis of breast cancer mortality trends will be needed to assess the relative effect of mammography, treatment and various risk factors.

**Jane F. Gentleman** is Assistant Director, Analytic Methods, Social Survey Methods Division, **Leslie A. Gaudette** is a senior analyst and **Judy Lee** is an analyst in the Health Statistics Division, Statistics Canada.

**CST**

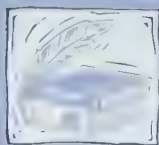
**Doctor visits, marital status and education are associated with women aged 50 to 69 having a mammogram**

(Reference category shown in <i>italics</i> )	Ever had a mammogram	Had a mammogram in previous two years (if ever had one)
<b>Province</b>		
<i>Saskatchewan</i>	1.00	1.00
British Columbia	0.82	0.84
Alberta	0.76	1.18
Quebec	0.74	0.26*
Ontario	0.74	0.48
Prince Edward Island	0.73	1.40
New Brunswick	0.41*	0.55
Manitoba	0.40*	0.23*
Nova Scotia	0.28*	0.46
Newfoundland	0.23*	0.39
<b>Lives in Census Metropolitan Area</b>		
<i>No</i>	1.00	1.00
Yes	1.23	1.63*
<b>Visited doctor in last 12 months</b>		
<i>No</i>	1.00	1.00
Yes	3.08*	3.43*
<b>Has cancer</b>		
<i>No</i>	1.00	1.00
Yes	2.85*	1.80
<b>Marital status</b>		
<i>Never-married</i>	1.00	1.00
Now married	2.15	1.21
Common-law	2.07	0.99
Separated/divorced	1.41	0.73
Widowed	2.29*	0.78
<b>Main activity last 12 months</b>		
<i>Working</i>	1.00	1.00
Working and caregiving	0.72	0.92
Caregiving	0.53*	0.74
Looking for work	0.58	0.20*
Retired (includes at school and ill)	0.56*	0.77
<b>Education</b>		
<i>Less than secondary</i>	1.00	1.00
Secondary	1.53*	0.83
More than high school	1.27	1.02
College or university	2.15*	1.16
<b>Household income</b>		
<i>Low</i>	1.00	1.00
Lower middle	0.74	0.72
Upper middle	1.00	0.78
High	0.98	1.07
<b>Place of birth</b>		
<i>Canada</i>	1.00	1.00
Other North America, Europe, Australia	0.81	1.45
South/Central America, Caribbean, Africa	0.33*	0.27*
Asia	0.29*	3.39

\* Statistically significant.

Source: Statistics Canada, National Population Health Survey, 1994-95.





## EDUCATORS' NOTEBOOK

*Suggestions for using Canadian  
Social Trends in the classroom*

### Lesson plan for "Older Canadians on the Move."

#### Objectives

- ☐ To identify the elements of a neighbourhood.
- ☐ To identify the services needed by people of different ages.
- ☐ To understand how demography affects the economic well-being of the community.

#### Method

1. Ask the students to build a profile of the neighbourhood around the school (define the boundaries clearly). As they walk around the area chosen, ask them to record such things as the number and type of retail stores (e.g. grocery, hardware, and clothing stores); housing (e.g. single family homes, apartment buildings); businesses (e.g. architects, plumbers); educational institutions; community services (e.g. fire stations, health care professionals); churches; transportation services (e.g. bus routes, parking lots, bike paths).
2. Based on the characteristics observed, what kind of neighbourhood is it? That is, are most of the residents families with teenagers, families with pre-schoolers, older couples, young singles, or a mix of different types of families and individuals.
3. Read "Older Canadians on the Move." Assume that 300 people, mostly seniors, arrive in the neighbourhood in the next 6 months. How might this change the neighbourhood? For example, would an old mansion be converted into a seniors' residence, a new gardening store open, the hardware store sell more adaptive aids like grab-bars for shower stalls, a dentist or General Practitioner open a new practice? Would the changes be different than those that followed the arrival of young families?
4. Assume that another 300 people, mostly young families, move into the neighbourhood in the next year. How might the neighbourhood change? For example, would portable classrooms be put up around the elementary school, children's shoe store open, more teenagers be hired to work in the local stores, traffic calming measures be introduced in the streets?
5. Assume that instead of an influx of new residents, 300 people leave the neighbourhood. Which elements of the neighbourhood would be the first to change?

#### Using other resources

- ☐ Use the E-STAT CD-ROM to develop a social and economic profile of a town. Identify the differences between its current conditions and those prevailing 5 or 10 years ago, in terms of employment levels, main industries, age and education of population, and so on.
- ☐ Read *Report on the Demographic Situation in Canada, 1996*, Statistics Canada Catalogue no. 91-209-XPE, to see how fertility rates differ in common-law relationships and legal marriages.
- ☐ Use the 1996 Census data available on the Statistics Canada website at [www.statcan.ca](http://www.statcan.ca).



#### Share your ideas!

Do you have lessons using CST that you would like to share with other educators? Send your ideas or comments to Joel Yan, Dissemination Division, Statistics Canada, Ottawa, K1A 0T6. FAX (613) 951-4513 or Internet e-mail: [yanjoel@statcan.ca](mailto:yanjoel@statcan.ca).



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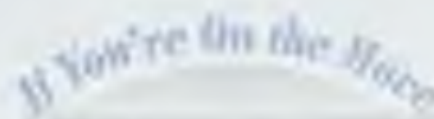
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## ANNUAL LABOUR FORCE ESTIMATES, 1980-1997

	Population 15+	Labour force (000s)			Participation rate (%)	Unemployment rate (%)	Employment/population ratio (%)
		Total	Employed	Unemployed			
1980 <sup>1</sup>	18,550	11,983	11,082	900	64.6	7.5	59.7
1981	18,883	12,332	11,398	934	65.3	7.6	60.4
1982	19,177	12,398	11,035	1,363	64.7	11.0	57.5
1983	19,433	12,610	11,106	1,504	64.9	11.9	57.1
1984	19,681	12,853	11,402	1,450	65.3	11.3	57.9
1985	19,929	13,123	11,742	1,381	65.8	10.5	58.9
1986	20,182	13,378	12,095	1,283	66.3	9.6	59.9
1987	20,432	13,631	12,422	1,208	66.7	8.9	60.8
1988	20,690	13,900	12,819	1,082	67.2	7.8	62.0
1989	20,968	14,151	13,086	1,065	67.5	7.5	62.4
1990	21,277	14,329	13,165	1,164	67.3	8.1	61.9
1991	21,613	14,408	12,916	1,492	66.7	10.4	59.8
1992	21,986	14,482	12,842	1,640	65.9	11.3	58.4
1993	22,371	14,663	13,015	1,649	65.5	11.2	58.2
1994	22,171	14,832	13,292	1,541	65.3	10.4	58.5
1995	23,027	14,928	13,506	1,422	64.8	9.5	58.6
1996	23,352	15,145	13,676	1,469	64.9	9.7	58.6
1997	23,687	15,354	13,941	1,413	64.8	9.2	58.9

<sup>1</sup> Estimates for 1980 to 1994 were revised to reflect results of the 1991 Census of population, including historical adjustments for census undercoverage and inclusion of non-permanent residents.

Employment-to-population ratio of youths aged 15-24, 1980 to 1996

CST



Source: Statistics Canada, Labour Force Survey.

Earnings profile of husband-wife families, 1981 to 1995

CST



Source: Statistics Canada, Catalogue no. 13-215-XPB.





# SOCIAL INDICATORS

	1990	1991	1992	1993	1994	1995	1996	1997
<b>POPULATION</b>								
Canada, July 1 (000s)	27,790.6	28,120.1	28,542.2	28,946.8	29,255.6 <sup>R</sup>	29,617.4	29,969.2	30,286.6
Annual growth (%)	1.5	1.2	1.5	1.4	1.1 <sup>R</sup>	1.2	1.2	*
Immigration <sup>1</sup>	202,979	219,250	241,810	265,405	234,457	215,470	208,791	*
Emigration <sup>1</sup>	39,760	43,692	45,633	43,993	44,807	45,949	47,230	*
<b>FAMILY</b>								
Birth rate (per 1,000)	15.3	14.3	14.0	13.4	13.2	12.9	12.5 <sup>E</sup>	*
Marriage rate (per 1,000)	6.8	6.1	5.8	5.5	5.5	5.4	5.2	*
Divorce rate (per 1,000)	2.8	2.7	2.8	2.7	2.7	2.6	2.4	*
Families experiencing unemployment (000s)	879	1,096	1,184	1,198	1,130	1,044	1,079	1,048
<b>LABOUR FORCE</b>								
Total employment (000s)	13,165	12,916	12,842	13,015	13,292	13,506	13,676	13,941
– goods sector (000s)	3,809	3,582	3,457	3,448	3,545	3,653	3,681	3,769
– service sector (000s)	9,356	9,334	9,385	9,567	9,746	9,852	9,995	10,172
Total unemployment (000s)	1,164	1,492	1,640	1,649	1,541	1,422	1,469	1,413
Unemployment rate (%)	8.1	10.4	11.3	11.2	10.4	9.5	9.7	9.2
Part-time employment (%)	17.0	18.1	18.5	19.1	18.8	18.6	18.9	19.0
Women's participation rate (%)	58.7	58.5	58.0	57.9	57.6	57.4	57.6	57.4
Unionization rate – % of paid workers	34.7	35.1	34.9	34.3	–	–	–	33.9
<b>INCOME</b>								
Median family income	45,618	46,389	47,199	46,717	48,091	48,079	49,411	*
% of families with low income (1992 Base)	12.3	13.0	13.5	14.6	13.5	14.5	14.5	*
Women's full-time earnings as a % of men's	67.7	69.6	71.9	72.2	69.8	73.1	*	*
<b>EDUCATION</b>								
Elementary and secondary enrolment (000s)	5,141.0	5,218.2	5,284.2	5,347.4 <sup>P</sup>	5,402.4 <sup>P</sup>	5,458.5 <sup>R</sup>	5,442.2 <sup>E</sup>	5,594.9 <sup>E</sup>
Full-time postsecondary enrolment (000s)	856.6	903.1	931.0	951.1 <sup>P</sup>	964.7 <sup>E</sup>	962.7 <sup>R</sup>	971.5 <sup>E</sup>	980.3 <sup>E</sup>
Doctoral degrees awarded	2,673	2,947	3,136	3,356	3,552	3,716 <sup>R</sup>	3,798 <sup>E</sup>	3,727 <sup>E</sup>
Government expenditure on education – as a % of GDP	5.8	6.3	6.4	6.2	5.9	5.7	*	*
<b>HEALTH</b>								
% of deaths due to cardiovascular disease – men	37.3	37.1	37.1	37.0	36.3	36.0	*	*
– women	41.2	41.0	40.7	40.2	39.7 <sup>R</sup>	39.3	*	*
% of deaths due to cancer – men	27.8	28.1	28.4 <sup>R</sup>	27.9	28.3	30.3	29.3 <sup>E</sup>	*
– women	26.8	27.0	27.3	26.9	27.0	27.3	27.9 <sup>E</sup>	*
Government expenditure on health – as a % of GDP	6.2	6.7	6.8	6.7	6.2	6.1	*	*
<b>JUSTICE</b>								
Crime rates (per 100,000) – violent	970	1,056	1,077 <sup>R</sup>	1,072	1,038 <sup>R</sup>	995	973	*
– property	5,593	6,141	5,868 <sup>R</sup>	5,524 <sup>R</sup>	5,212 <sup>R</sup>	5,235 <sup>R</sup>	5,192	*
– homicide	2.4	2.7	2.6	2.2	2.0	2.0	2.1	*
<b>GOVERNMENT</b>								
Expenditures on social programmes <sup>2</sup> (1995 \$000,000)	183,505.7 <sup>R</sup>	190,745.5 <sup>R</sup>	207,245.8 <sup>R</sup>	214,317.3 <sup>R</sup>	215,567.4	208,494.6	*	*
– as a % of total expenditures	56.0 <sup>R</sup>	56.8 <sup>R</sup>	58.5 <sup>R</sup>	60.0 <sup>R</sup>	60.1	58.3	*	*
– as a % of GDP	24.5 <sup>R</sup>	26.7 <sup>R</sup>	28.8 <sup>R</sup>	29.4 <sup>R</sup>	28.2	26.9	*	*
UI beneficiaries (000s)	3,261.0	3,663.0	3,658.0	3,415.5	3,086.2	2,910.0	*	*
OAS and OAS/GIS beneficiaries <sup>m</sup> (000s)	3,005.8	3,098.5	3,180.5	3,264.1	3,340.8	3,420.0	3,500.2	*
Canada Assistance Plan beneficiaries <sup>m</sup> (000s)	1,930.1	2,282.2	2,723.0	2,975.0	3,100.2	3,070.9	*	*
<b>ECONOMIC INDICATORS</b>								
GDP (1986 \$) – annual % change	-0.2	-1.8	+0.8	+2.2	+4.1	+2.3	+1.5	*
Annual inflation rate (%)	4.8	5.6	1.5	1.8	0.2	2.1	1.6	1.6
Urban housing starts	150,620	130,094	140,126	129,988	127,346	89,526	101,804	*
– Not available      * Not yet available <sup>P</sup> Preliminary data <sup>E</sup> Estimate <sup>m</sup> Figures as of March <sup>PD</sup> Final postcensal estimates <sup>PP</sup> Preliminary postcensal estimates <sup>PR</sup> Updated postcensal estimates <sup>IR</sup> Revised intercensal estimates <sup>R</sup> Revised data <sup>F</sup> Final data								
<sup>1</sup> For year ending June 30. <sup>2</sup> Includes Protection of Persons and Property; Health; Social Services; Education; Recreation and Culture.								

### Teenagers least likely to wear bicycle helmet



Although the majority of the 1,665 bicycle-related deaths from 1980 to 1994 (57%) occurred among riders under age 20, few teenaged riders wear a bicycle helmet. According to the 1994-95 National Population Health Survey, only 16% of cyclists aged 12 to 14 and only 8% of those aged 15 to 19 always wore a helmet when riding. Most teens said they did not own a helmet, while others said they were uncomfortable wearing one. Girls were more likely to say they worried about being ridiculed, a fear reflected in the fact that girls were less likely than boys to wear a helmet.

Helmet use was highest in Ontario and British Columbia, and lowest in the Prairies and Quebec. Both adults and children in rural areas were less likely than urban residents to wear a helmet regularly when cycling. Higher rates of helmet use were also associated with high income and higher levels of education.

**Health Reports**, Autumn 1997, Vol. 9, no. 2  
Statistics Canada, Catalogue no. 82-003-XPB

### Tuition financing bigger share of university budgets



Almost one-quarter of university operating revenues came from student fees in 1995, compared with only one-sixth in both 1975 and 1985. Between 1990 and 1995, students have seen an average 62% tuition fee increase in real terms (after inflation). The increase occurred mainly because government grants did not keep pace with increasing enrolments. In 1980, universities received almost \$6.50 in government grants for every one dollar they collected from students; by 1995, this had fallen to just under \$3. Despite the fee increases, the percentage of young people attending university continued to rise, perhaps because the recession of the early 1990s convinced many youths to further their education.

**Education Quarterly Review**, Summer 1997, Vol. 4, no. 2  
Statistics Canada, Catalogue no. 81-003-XPB

### Canadians going back to the movies



The number of movie theatre admissions reached 85 million in 1995-96, its highest level in 13 years. Although overall growth was up 3% from the previous year, five provinces reported declines in attendance, with the largest drops experienced in Manitoba (-11%) and New Brunswick (-6%). Attendance increased the most in the Yukon and Northwest Territories (+19%) and Alberta (+8%). Renewed interest in movies may have been kindled by larger multi-screen theatres and by lower ticket prices, which have declined an average of 12% over the last four years thanks to discount specials like cheap Tuesdays and children's matinées.

**Motion Picture Theatre Survey, 1995-96**  
Statistics Canada, Product no. 87F0009XPE

### Proportion of adults attending school full-time doubles in 20 years



Between October 1976 and October 1996, the percentage of adults enrolled in school full-time doubled from 1.0% to 2.1%, or from 107,000 to 344,000. Although men were more likely to outnumber women at the start of the period, by the mid-1990s roughly equal numbers of men and women were sitting in the classroom. Most adult students are studying to improve their work prospects, with 8 in 10 citing their present or future job as the main reason for returning to school full-time.

**Perspectives on labour and income**, Autumn 1997, Vol. 9, no. 3  
Statistics Canada, Catalogue no. 75-001-XPE

### Almost one in five workers self-employed in the 1990s



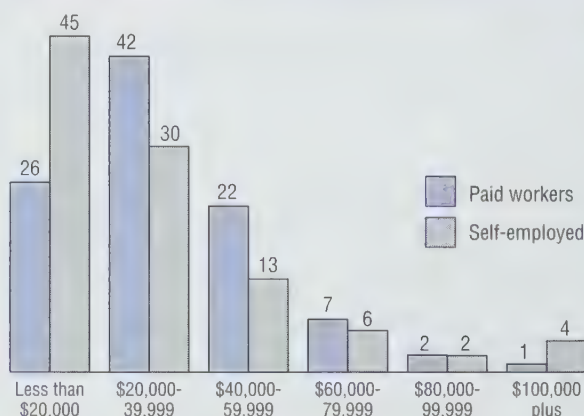
Almost three-quarters of the increase in jobs between 1989 and 1996 went to self-employed workers. The self-employed now account for 18% of the workforce, up from 14% in 1989 and 12% in 1976. Women entrepreneurs have recorded the strongest growth, accounting for one-third of the self-employed in 1996 compared with one-quarter in 1976.

In 1996, half of the self-employed worked in the trade, business services and personal and households services; and one-quarter worked in agriculture or construction. Most of the self-employed were drawn to the independence, flexibility, and opportunity to run a business or the possibility of making more money. But the average earnings of the self-employed were only about 91% of paid workers. This average masks the fact that self-employed earnings were "polarized" – about 45% made less than \$20,000 in 1995 but over 4% made more than \$100,000.

**Labour force update: The self-employed**  
Statistics Canada, Catalogue no. 71-005-XPB

#### Self-employed earnings more polarized than paid workers

% in each earnings group



Source: Statistics Canada, Catalogue no. 71-005-XPB



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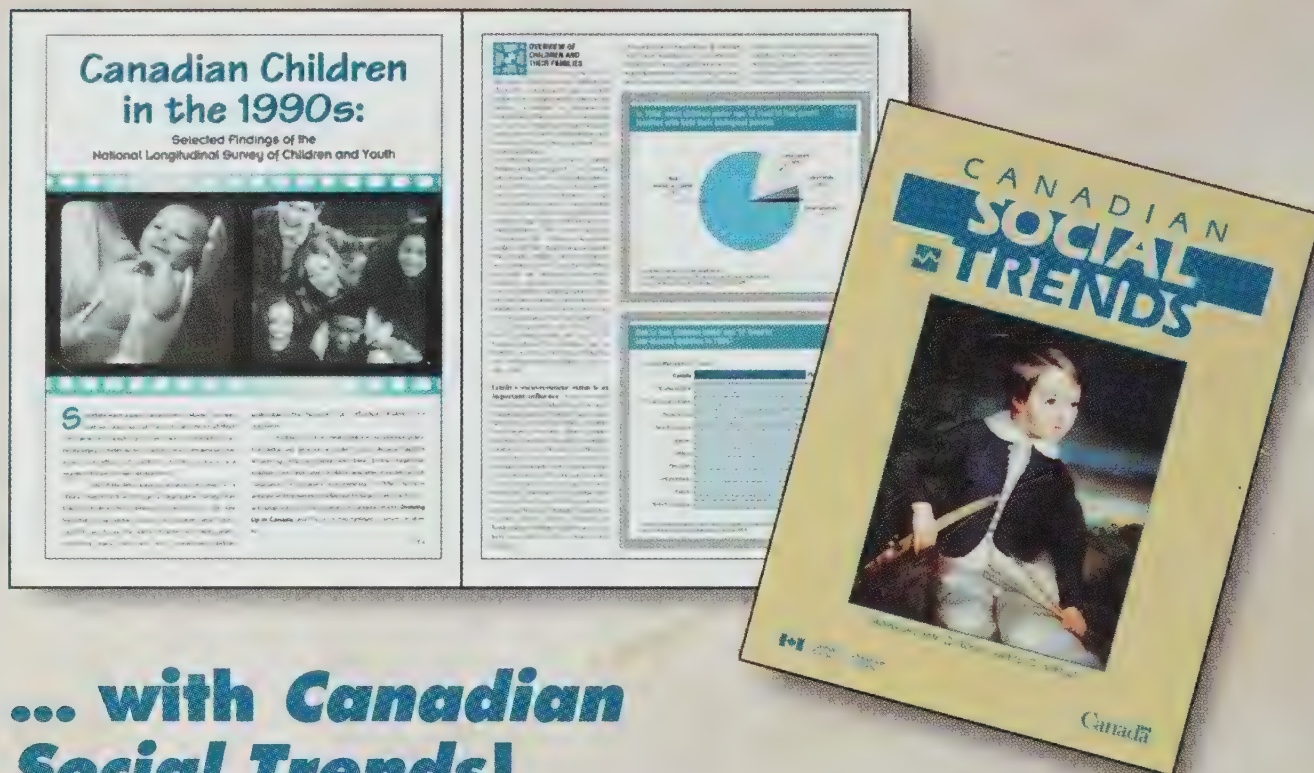
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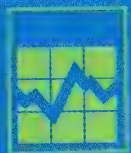
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# SOCIAL TRENDS



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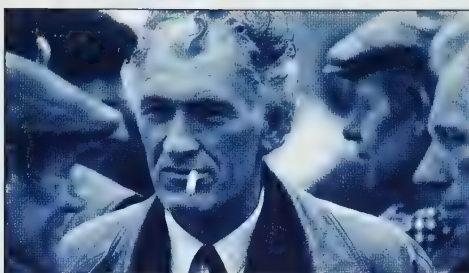




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### ON OUR COVER:

"The Regatta" (1914), oil on canvas, 46.0 x 56.3 cm. Collection: National Gallery of Canada, Ottawa.

### About the Artist:

**May H. Mabel** was born in Westmount, Quebec in 1884. At 25, she entered the classes of William Brymner at the

Montreal Museum of Fine Arts (1909-1912). She found an abundance of subject matter in the streets of Montreal, the banks of the St. Lawrence River and the rolling hills of the Laurentians. In 1916 she was elected an Associate of the Royal Canadian Academy of Arts, and in 1918 painted several canvases for the Canadian War Memorials of women making shells. In 1933 she became a founding member of the Canadian Group of Painters. She died in Vancouver in 1971.

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### Acknowledgements

P. JENNINGS, M. KAISERMAN, W. MILLAR,

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Indexed in the **Canadian Magazine Index**, **Public Affairs Information Service, Inc.** and available on-line in the **Canadian Business and Current Affairs Database**.

ISSN 0831-5698

CANADIAN SOCIAL TRENDS – SUMMER 1998



# **Exposure to second-hand smoke**

Public concern about environmental tobacco smoke (ETS), also known as second-hand smoke, has grown considerably in the last decade. Communities across Canada have developed new laws and policies that ban or restrict smoking in many workplaces and public buildings.<sup>1</sup>

*by Warren Clark*





In the United States, the Centers for Disease Control reported that nearly 9 out of 10 non-smoking Americans are exposed to ETS as measured by their blood levels of cotinine, a chemical the body metabolizes from nicotine.<sup>2</sup> In Canada, no similar national measures of exposure to ETS using blood tests exist. However, the 1995 General Social Survey (GSS) did investigate Canadians' exposure to second-hand smoke.

**Nearly half of non-smokers are exposed to second-hand smoke** In 1995, 4.5 million non-smoking Canadians aged 15 and over were exposed to cigarette smoke on a daily basis. Another 2.2 million were exposed to it at least once a week, while about 840,000 were exposed to it less frequently. In terms of percentages, about 28% of non-smokers aged 15 and over breathed second-hand smoke every day, while about 19% were exposed to it somewhat less often. Just over half of non-smokers reported that they were not exposed to ETS.

<sup>1</sup> Health Canada, "Smoking By-Laws in Canada 1995," Office of Tobacco Control, 1995.

<sup>2</sup> James L. Pirkle et al., "Exposure of the US Population to Environmental Tobacco Smoke — The Third National Health and Nutrition Examination Survey, 1988 to 1991," *Journal of the American Medical Association*, Vol. 275, No. 16, 24 April 1996, pp. 1233-1240.

**Teenaged non-smokers most likely to be exposed to second-hand smoke** An age group's exposure to second-hand smoke and its members' smoking rates parallel each other, perhaps because social interactions are most common

between people of similar age. Smoking rates and non-smokers' exposure to ETS for those aged 20 and over are quite similar. However, non-smoking teenagers aged 15 to 19 had much higher rates of daily contact with second-hand smoke

## CANADIAN SOCIAL TRENDS BACKGROUNDER

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### General Social Survey (GSS)

This article uses data from the 1995 GSS to examine the exposure of non-smokers to cigarette smoke. The GSS covers persons aged 15 and over living in private households in the 10 provinces. Data were collected from nearly 11,000 respondents, representing over 23 million people, 70% of whom were non-smokers (i.e., had never smoked cigarettes or were former smokers who had not smoked in the 30 days before the survey).

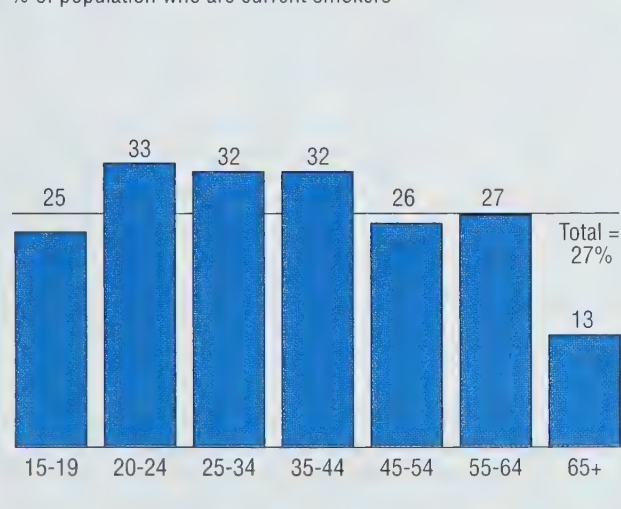
The 1995 GSS asked Canadian adults how often and where they were exposed to ETS; had they noticed any effects as a result of exposure to ETS; were there smoking restrictions in their homes; and what illnesses or physical irritations they believed had been caused by second-hand cigarette smoke.

The level of health risk that non-smokers face from second-hand smoke depends on the number of cigarettes smoked, room size, tar level in the cigarette, duration of exposure and ventilation level of the room. Lacking this information, the GSS is unable to estimate the relative health risk to which individuals are exposed. However, it is probably safe to say that the more frequent the exposure to second-hand smoke, the greater the health risk becomes.

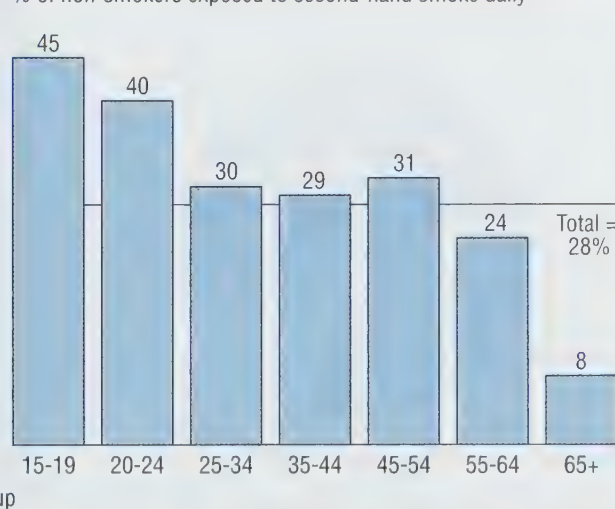
## Young non-smokers are most likely to be exposed to second-hand smoke, 1995<sup>1</sup>

CST

% of population who are current smokers



% of non-smokers exposed to second-hand smoke daily



<sup>1</sup> 1996 smoking rates were somewhat higher than 1995.  
Source: Statistics Canada, 1995 and 1996 General Social Survey.



(45%) than their 25% smoking rate. Teenaged non-smokers are not only exposed to ETS by their peer group but also by their parents. In fact, the home is the most common source of second hand smoke for non-smoking teenagers.

**Exposure most common at home** In 1995, 20% of adult non-smokers lived with a smoker. However, only 11% of non-smokers (1.8 million) encountered daily second-hand smoke at home because not all smokers smoked in their presence every day. Children are even more likely to be living with a smoker. Some 22% of non-smoking teenagers aged 15 to 19 experienced daily exposure to second-hand smoke at home while 37% of children under the age of 12 had at least one parent who smoked daily.<sup>3</sup>

The harmful consequences of smoking at home are wide-ranging. Children exposed to ETS are particularly susceptible to respiratory infections while parental smoking is a substantial influence on teenaged smoking behaviour.<sup>4</sup> In fact, the majority (84%) of adults who had ever smoked picked up the habit before they reached age 20. Governments have tried to restrict the sale of cigarettes to children and teenagers, yet many children live in homes where smoking parents set an example for future behaviour of their children.

**More men exposed to second-hand smoke** On a daily basis, about one in three non-smoking men age 15 and over were exposed to second-hand smoke compared with less than one in four non-smoking women. The home is the most common place of ETS exposure for women who do not smoke. Thirteen per cent breathe second-hand smoke every day at home, which is double the proportion (6%) who are most frequently exposed to ETS at work. For non-smoking men, the pattern is the opposite:

15% have daily ETS exposure at their workplace while 9% breathe second-hand smoke daily at home. Women have higher ETS exposure at home in part because they spend more time at home than men, while men are employed for more hours than women and therefore experience greater exposure at work than women.

**Half of non-smoking households ban smoking in their homes** About half of people living in non-smoking households asked smokers to abstain from smoking in their home. Smoking restrictions in homes with a mix of smokers and non-smokers were less common and less stringent: only one-third had limits, with total bans being most common. Not surprisingly, about 90% of households comprised solely of smokers had no restrictions on cigarette smoking within the home.

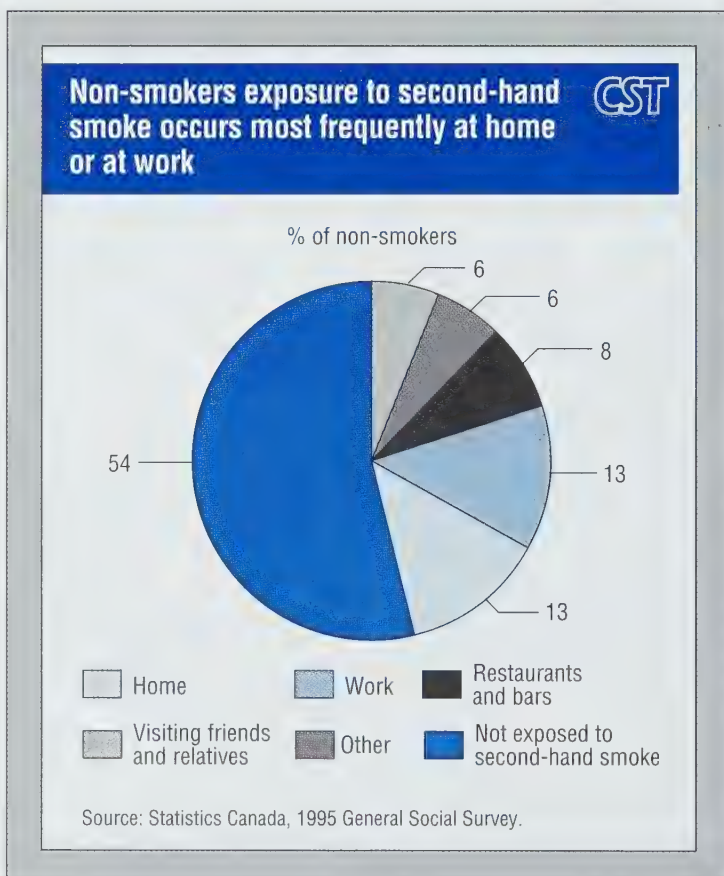
Smoking parents are more likely to restrict smoking in their home if they have very young children; for example, asking smokers to abstain from smoking in the house, limiting smoking to certain rooms or restricting smoking in the presence of young children. According to the 1995 GSS, nearly half (45%) of smoking households with children under age 5 placed limits on smoking in the home. Those with older children, however, were less likely to do so: 34% restricted smoking if the youngest child was age 5 to 14, 23% if the youngest was age 15 or over and 18% if there were no children.

**Second-hand smoke most frequent in manufacturing industries** Evidence of the health risks of second-hand smoke has been accompanied by a wave of social action to regulate tobacco smoking in the work place and in public buildings to protect non-smokers from exposure to smoke. In 1995, about 1.7 million non-smokers (10%), were exposed to second-hand smoke at work on a daily basis while another 374,000 encountered it at least once a week.

Exposure to second-hand smoke varies from industry to industry, influenced by the smoking behaviour of workers and smoking restrictions in each industry. In 1995, the lowest rate of non-smokers' exposure to ETS occurred in industries with high proportions of white-collar workers: education and related industries (8%); finance, insurance and real estate industries (12%); services to business management (12%) and health and welfare community services (14%).

In contrast, non-smoking workers were more likely to be exposed to second-hand smoke in the manufacturing industries (36%), non-traditional primary industries (32%), transportation and storage industries (30%) and product-differentiated manufacturing (29%). The consumers' services industry — such as retail trade, personal and recreational services — lies somewhere in the middle with 21%.

**Three out of five non-smokers bothered by ETS** Second-hand smoke bothered the majority (61%) of non-smokers; in addition, 47% of non-smokers were physically irritated, reporting such symptoms as irritated eyes, breathing difficulties or a sore



<sup>3</sup> Statistics Canada, National Longitudinal Survey of Children and Youth, 1994.

<sup>4</sup> Warren Clark, "Youth smoking in Canada", *Canadian Social Trends*, Winter 1996.



throat. Non-smokers exposed to smoke on a daily basis were less likely to indicate being annoyed (54%) while those with less frequent exposure were more likely to feel that way — for example, 72% of those exposed to ETS less than once a month were bothered by it. This may indicate that non-smokers who are particularly troubled or irritated by smoke avoid situations where they are likely to encounter it. Alternatively, infrequent exposure may mean they are less habituated to ETS and therefore find it more irritating. Overall, women non-smokers are more likely to object to ETS than men, regardless of the frequency of exposure. Not surprisingly, only 21% of smokers felt bothered by smoke.

**Beliefs about second-hand smoke** The 1994-95 Survey on Smoking in Canada asked Canadians whether they felt cigarette smoking could cause health problems in a non-smoker. The majority, 84%, answered "yes". Young people and those who had never smoked were most likely to agree; older smokers were least likely to do so. The survey found that 96% of 15- to 19-year-old non-smokers believed there is a link between ETS

and poor health among non-smokers, compared with only half of smoking seniors.

National data are not yet available to show the public's support for bans or restrictions on smoking in public places. However, according to an Ontario survey, the vast majority of adults — both smokers and non-smokers — support smoking restrictions in public settings such as restaurants, workplaces, banks and movie theatres.<sup>5</sup> The 1996 National Population Health Survey will provide more insight into Canadians' attitudes on exposure to ETS.

**Summary** In Canada over the past 20 years, the growth in our understanding of the risk associated with second-hand smoke has been accompanied by changing attitudes on smoking and by the growing pressure of legislation, regulation and voluntary action that addresses where smoking may occur in public. Many jurisdictions now have legislation to control or restrict smoking in various public settings, acting on the belief that smoker's rights end when their behaviour affects the health and well-being of others. Yet many non-smokers continue to be exposed to second-hand smoke in their own homes and places of work.

<sup>5</sup> M.J. Ashely, S.B. Bull, and L.L. Pederson, "Restrictive Measures on Smoking in Ontario — Similarities and Differences between Smokers and Non-smokers in Knowledge Attitudes and Predicted Behaviour and Implications for Tobacco Programs and Policies," *The Ontario Tobacco Research Unit, Working Paper*, 1994.

**Warren Clark** is an analyst with *Canadian Social Trends*.

## CANADIAN SOCIAL TRENDS BACKGROUND

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### Environmental tobacco smoke (ETS) linked to health of non-smokers

In 1991, Health Canada estimated that more than 300 Canadian non-smokers die each year from lung cancer caused by ETS.<sup>1</sup> As well, evidence is growing that ETS exposure increases the risk of heart disease deaths among non-smokers. American researchers have estimated that at least 10 times the number of non-smokers die from ETS-linked heart disease than from lung cancer.<sup>2</sup> A similar situation is likely to exist in Canada. In addition to lung cancer and heart disease, two of the most serious effects of exposure, ETS also contributes to a host of other problems including reduced lung function, increased coughing, phlegm production and chest discomfort — all signs of deteriorating respiratory health. In children, ETS exposure is recognized as a cause of respiratory infections such as bronchitis and pneumonia and may contribute to middle ear problems, upper-airway irritation and a reduction in lung function.

<sup>1</sup> Eva M. Makomaski Illing, Murray J. Kaiserman, "Mortality Attributable to Tobacco Use in Canada and its Regions, 1991", *Canadian Journal of Public Health*, Vol. 86, No. 4, July-August 1995, pp. 257-265.

<sup>2</sup> U.S. Department of Health and Human Services, U.S. Environmental Protection Agency, "Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders — The Report of the U.S. Environmental Protection Agency", Washington, 1993.

CST



# GETTING AHEAD IN LIFE

## does your parents income? count?

It is increasingly suggested that the current generation of young Canadians will not be as well-off as their parents. While older workers are worried about financing their retirement, younger workers are concerned about finding secure, well-paid employment. Diminishing opportunities could affect the ability of the younger generation to support themselves and their families.

The study of intergenerational equity addresses the social and economic issues that arise from changing relations between older, younger and future generations as our society ages. As a series of studies addressing various aspects of these relations has recently been published by Statistics Canada in a volume entitled *Labour Markets, Social Institutions, and the Future of Canada's Children*. Selected findings from two chapters are excerpted here. Each article addresses separate but related aspects of transfers between generations, focusing on how parents' educational and labour market background contribute to their children's long-term prospects as adults.

— Ed.



by Miles Corak



Parents hope their children will become successful and self-sufficient adults. But raising children is a complicated affair, and a child's fortune in life is determined not only by parenting strategies, but also by the support available in the community, the resources offered by the state, and sometimes just plain luck. That being said, a prime role in the eventual labour market outcomes of children is often attributed to money.

If the role of money in the process were simple, then every dollar — no matter where it came from and who received it — should have the same impact on a child's employment earnings in adulthood. But this article shows that a dollar is not a dollar is not a dollar, and strongly suggests that the sources of a parent's income influence the employment outcomes of their grown-up children. First, the adult earnings of all children are compared to see how much they are affected by the income of parents and of the neighbourhood; then, the adult earnings of children from very-low-income families are studied to learn if they are influenced by the same factors.

**All dollars are not created equal** If only money matters to a child's labour market outcomes, then it should not matter where the dollar comes from — whether from paid work, self-employment, assets, government transfers, or any other source. However, if a dollar from one source has a different effect than a dollar from another, other factors are probably at work. Thus, an effective way to evaluate the role of money in children's labour market success as adults is to examine the composition of their parent's income (in this case, the father's income).

The source of the father's income is strongly associated with the adult incomes of children. Children had significantly higher market incomes as adults if their fathers had self-employment income than if they did not — almost \$1,200 for sons and \$850 for daughters in 1994. If fathers had received Unemployment Insurance (UI) benefits, the effect was just as dramatic but in the opposite direction: sons' incomes were \$1,400 and daughters' \$870 lower than those of children whose fathers who had not received UI.

A father with asset income provided the most significant advantages for his

children. After accounting for all other factors, sons whose fathers had some income from assets earned over \$3,100 more than those whose fathers had no assets, and daughters earned almost \$2,700 more. These are very substantial amounts, but what may be even more significant is that the actual dollar amount

of the father's asset income seems much less important than its presence. In fact, children's adult incomes rise by only an average \$28 for every \$1,000 increase in their father's asset income; for example, someone whose father had \$10,000 in asset income would enjoy a market income that was only \$252 higher

## CANADIAN SOCIAL TRENDS BACKGROUNDER

CST

### What you should know about this study

This analysis is based upon income tax information reported by a cohort of about 285,000 young men and women aged 28 to 31 in 1994. The total market income of these young adults was related to the incomes of their fathers and mothers in 1982, when they (the children) were 16 to 19 years of age and still living at home. The analysis excludes families headed by single mothers and taxfilers not residing in an "urban" community in 1982. All monetary values are presented in 1986 constant dollars.

Estimates of the degree of association between parent and child incomes took account of (controlled for) neighbourhood median income, the province of residence, and a number of individual and family characteristics, including the number of residential moves experienced during the five-year period 1978 and 1982 (as determined by examining the addresses on the father's income tax returns). However, the effects of some socio-demographic factors that are also known to influence labour market experiences — such as parental education, immigrant status and occupation — cannot be controlled for because the information is not available from tax records.

**Total income:** all income derived from market activities (wages and salaries, self-employment, pension, investment and interest income) and any government transfers (such as UI benefits, social assistance, family allowance and so on). Data for parents is total income.

**Total market income:** all income derived from market activities. The income of adult children excludes government transfers because the children's labour market outcomes can only be measured by examining their earnings from market-based sources (employment and investments).

**Asset income:** net income from interest and investments, net income from real estate, dividends from Canadian corporations, and taxable capital gains/losses. Corrections are made for changes in tax laws so that parent-child incomes can be legitimately compared through time.

**Neighbourhood:** area in which all individuals have the same first three characters in their postal codes (Forward Sortation Area, or FSA). A "high" income neighbourhood has a median income in the top 25% of all neighbourhoods nation-wide, and a "low" income neighbourhood has a median income in the bottom 25%.

**Income decile:** a scale for measuring the distribution of the population according to income; in this case, the population of taxfilers was ranked from lowest to highest income and divided into ten equal parts. The 10% of people with the lowest incomes are in the bottom decile, the 10% with the highest incomes in the top decile, and so on.



(\$280 – \$28) than a person whose father had \$1,000 in asset income.

So why might the simple presence of asset income, as opposed to its amount, have such an effect? Asset income includes interest on bank deposits, and since interest rates were very high during the late 1970s and early 1980s (the prime rate exceeded 19% in 1981), even relatively small savings would have generated some interest income. Yet having any amount of asset income may also indicate that parents consider it important to plan for the future, a quality that may be passed on to their children and contribute to their labour market success later in life.

### Fathers' income has greater effect on sons' than daughters' earnings

Not only do varying sources of income have different effects on an adult child's labour market success, but so does the parent who earns it. For every \$1,000 increase in the father's income, the adult child's market income increased by about \$91 for sons and about \$47 for daughters. In contrast, sons and daughters did equally well

as the mother's income rose — about \$80 to \$90 per \$1,000 increase.

There are two possible explanations for this finding. The first focuses on the father's role and suggests that a high-earning father has a stronger effect on sons than on daughters by encouraging the pursuit of income.<sup>1</sup> The second keys on the mother's role and suggests that mothers may be more likely to treat children of each gender equally when making spending decisions, and if women have higher incomes, they probably have greater discretion over spending. This interpretation is based on studies that show household spending differs depending on which parent receives the income, and that control over the family's spending is important for child outcomes.<sup>2</sup>

**Community ties matter** The affluence of the neighbourhood in which children, especially boys, spend their early teens is positively associated with their incomes as adults. For every \$1,000 increase in the median income of the neighbourhood, adult incomes increased by about \$370

for sons, and by \$72 for daughters. There are a number of reasons why high-income neighbourhoods may improve the labour market outcomes of children. They may offer a more well-developed physical infrastructure — higher quality schools, recreation facilities, and social institutions — as well as the kind of network or peer group effects sometimes called "social capital"<sup>3</sup> — that is, the set of norms or standards that exist at the community level and help to reinforce the parents' goals for their children. An alternative interpretation is that parents will select a neighbourhood with the qualities they prefer if they can afford to choose the community where they raise their children. The type of neighbourhood may thus reflect the parents' choices and priorities for their children's future, rather than being a causal factor in its own right.

If community networks and relationships are important for children, then the more frequently these are broken, the greater the consequences for incomes in adulthood. The adult children of fathers who moved once during their teens earned about \$550 less than those whose fathers stayed in the same neighbourhood; children whose fathers moved three or more times earned about \$2,000 less.

**Do different dollars also matter to low-income children?** Clearly, different dollars produce different effects for the "average kid." Does the same hold true for low-income children? To address this question, adult children's labour market success is assessed by measuring the income mobility of children from low-income families: did they do better, as adults, than their parents by moving into higher deciles of the income distribution?

In a world of equal opportunity, the labour market outcomes of adult children would not depend upon their family

### Adult children had substantially higher market incomes if their fathers had some asset income

CST

	Market income of adult child changed by \$...	
	Sons	Daughters
<b>Father's income</b>		
<i>If father reported income from</i>		
Self-employment	1,157	850
Assets	3,107	2,698
Unemployment Insurance	-1,442	-865
<i>For every \$1,000 increase in father's income from</i>		
Paid work	91	47
Self-employment	76	50
Assets	28	28
Unemployment Insurance	-10	-23
<b>For every \$1,000 increase in</b>		
Mother's income	90	82
Median income of neighbourhood	368	72
<b>For every residential move</b>		
One	-544	-554
Two	-1,059	-1,282
Three or more	-2,134	-1,819

Source: Statistics Canada, Longitudinal Administrative Databank.

<sup>1</sup> Martha S. Hill and Greg J. Duncan (1987). "Parental Family Income and the Socioeconomic Attainment of Children." *Social Science Research*. Vol. 16, pp. 39-73.

<sup>2</sup> Shelly J. Lundberg, Robert A. Pollack, and Terence J. Wales (1997), "Do Husbands and Wives Pool Their Resources?" *Journal of Human Resources*. Vol. 32, pp. 463-80. Shelley Phipps and Peter Burton (1992), "What's Mine is Yours? The Influence of Male and Female Incomes on Patterns of Household Expenditure." Working Paper No. 92-12, Department of Economics, Dalhousie University.

<sup>3</sup> James S. Coleman (1988). "Social Capital in the Creation of Human Capital." *American Journal of Sociology*. Vol. 94 Supplement, pp. S95-S120.



background. Ideally, a child with a very-low-income father (bottom 10% of the income distribution) would have an equal chance of entering any income decile; that is, the child would be just as likely to become a very-high-income earner (10%) as a very-low-income-earner (also 10%).

But in fact, children of very-low-income fathers were more likely to follow in their fathers' footsteps than to improve their own position in the income distribution. About 15% of sons also found themselves in the bottom decile, and another 14% moved up by only one decile. The figures for daughters were very similar, at 14% and 11% respectively. Only about 6% of sons and daughters of very-low-income fathers managed to reach the top 10% of the income rankings. (In contrast, over 20% of sons and daughters born to fathers in the top decile also occupied the top decile, and less than 7% fell all the way to the bottom.) These patterns suggest that low-income in one generation is associated with low-income in the next, with children of very-low-income families most likely to end up at the bottom of the income hierarchy.

A father's sources of income had a clear effect on their adult children's incomes. Children were less likely (12 to 13%) to remain in the bottom income decile if their father had some self-employment income than if he did not (15 to 16%), while children whose father received UI benefits were more likely to remain there (15 to 16%) than if he did not (13 to 14%).

However, the most striking result is the improvement in income mobility if a father reported some asset income: only 12% of sons remained in the bottom decile, compared with over 17% of those whose fathers had no income from assets. For daughters, the pattern was very similar, at 11% compared with 17%. This finding would seem to strengthen the suggestion made earlier about the personal attributes that having asset income imply: although these fathers were in the bottom 10% of the income distribution, having a total annual income of less than \$15,000 (1986 constant dollars), they were able to set aside some amount of money in anticipation of the future.

The community has as great an effect on a low-income child as on the average child. Children of very-low-income

fathers living in high-income neighbourhoods tended to do better. This was especially true in the case of sons; only 12% remained in the bottom income decile if they grew up in a high-income community, compared with 16% if they were raised in a low-income neighbourhood. For daughters, the difference was slight, at 14% and 15% respectively.

Since a "good neighbourhood" can have such a positive effect, it is not surprising to find that moving is generally detrimental to a child's adult earnings. If children with very-low-income fathers moved at least once during the period 1978 to 1982, between 16% and 17% also ended up with very low adult incomes; if they did not

move, between 13% and 14% remained in the bottom decile.

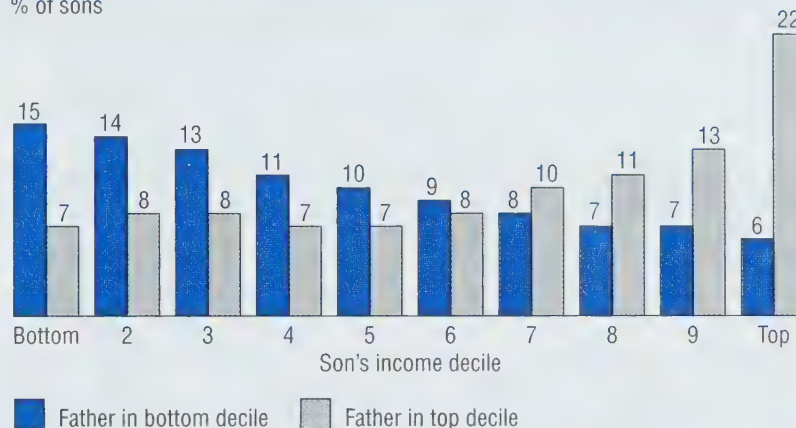
**Summary** Money does matter to the eventual labour market success of children. But how it is obtained, by whom, and where, also matter. Why should this be so? The findings presented here underline the complex nature of the processes that determine the type of job and level of income a child will have, a process that involves both the family and the community.

The contrasting effects of the different sources of a parent's income may reflect the parent's personal attributes (which are not observable with conventional data sets). This may be particularly so in the

### One in six sons of very-low-income fathers also had incomes in the lowest decile

CST

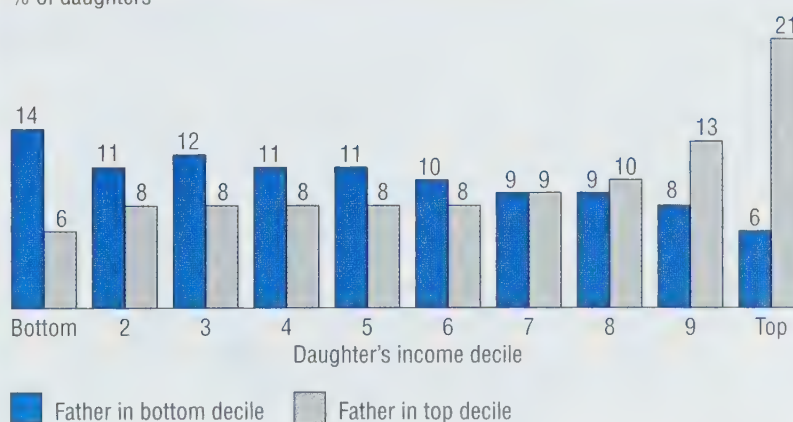
% of sons



### Daughters of very-low-income fathers were also over-represented in the lowest income decile

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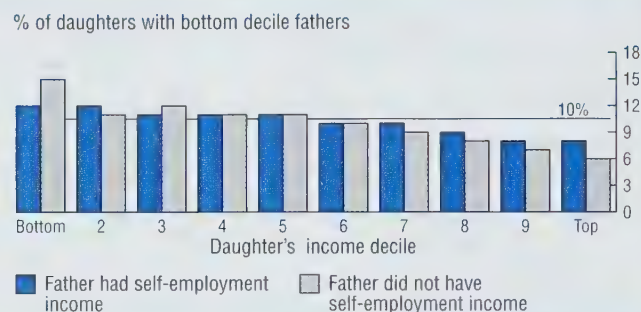
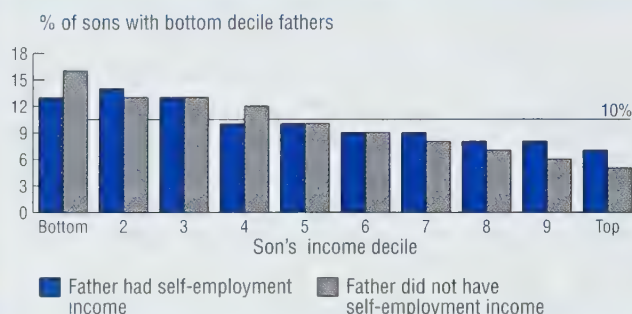
% of daughters



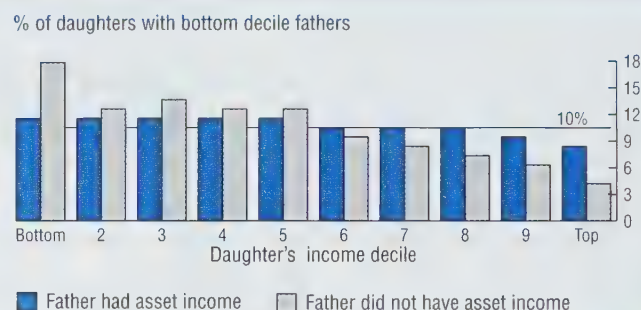
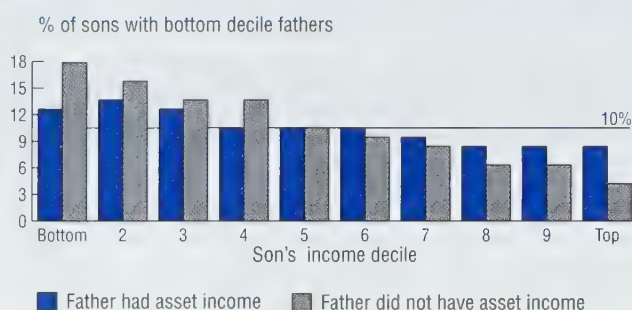
Source: Statistics Canada, Longitudinal Administrative Databank.



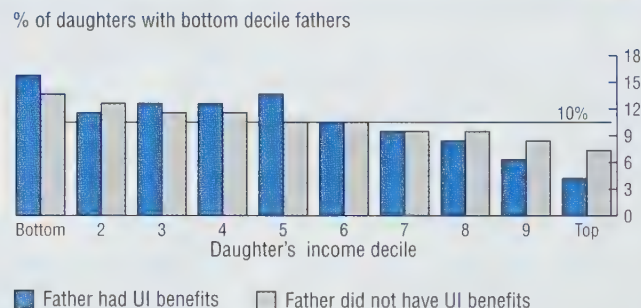
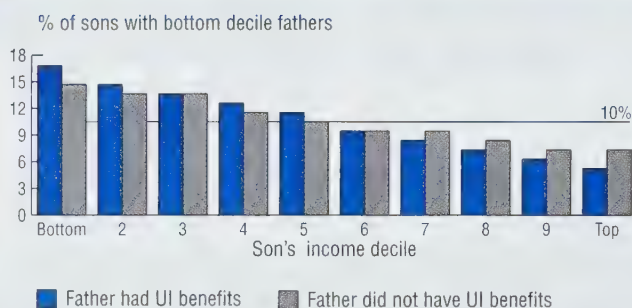
## Sons and daughters whose very-low-income fathers had self-employment income did better than those whose fathers had not...



## ... as did those children whose fathers had some asset income ...



## ... but sons and daughters were more likely to have low adult incomes if their fathers had received UI benefits



Source: Statistics Canada, Longitudinal Administrative Databank.

case of asset income, which is so strongly associated with the adult children's incomes. A recent study has argued, for example, that a parent's integrity, responsibility, and a good work ethic — all of which are valued by employers — also contribute to positive child outcomes, regardless of the parent's income.<sup>4</sup>

The future prospects of children are also influenced by the community in which they live, although the neighbourhood may reflect attributes such as stability in the child's family, rather than being an independent influence.

These findings, however, simply underscore the complex nature of raising self-sufficient and financially successful children. While a child's labour market success is influenced by the economic resources available to the parents, other factors both in the family and in the community play a role — quite possibly a central role. As every parent knows, when it comes to children, more than money matters.

<sup>4</sup> Susan E. Mayer (1997), *What Money Can't Buy: Family Income and Children's Life Chances*, Cambridge: Harvard University Press, p. 2.

• This article is adapted from "How to Get Ahead in Life: Some Correlates of Intergenerational Income Mobility in Canada," *Labour Markets, Social Institutions, and the Future of Canada's Children*, Statistics Canada, Catalogue Number 89-553-XPB.

**Miles Corak** is senior economist in the Analytical Studies Branch, Statistics Canada.



# GETTING AHEAD IN LIFE

## does your *parents* *education* count?

Education is an important determinant of one's position in society, affecting a person's participation in the community and likely success in the labour market. The inherited intellectual capital of the family – forged over the years by generations of family members' achievements at school and work – often plays a large role in a child's educational achievement. It can contribute directly to a child's education by providing a more or a less supportive environment for learning, and can contribute indirectly by paving the way for a higher level of educational attainment. This article assesses the role of inherited intellectual capital in children's acquisition of postsecondary education.



by Patrice de Broucker and Laval Lavallée



## Most adults aged 26 to 35 have as much or more education than their parents<sup>1</sup>

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Parent's education	Child's level of education		
	Higher	Same (%)	Lower
Total	51	34	16
Did not complete secondary	84	15	--
Completed secondary	40	46	--
Postsecondary	--	45	40

-- Sample too small to produce reliable estimate.

<sup>1</sup> Parent with highest level of educational attainment.

Source: Statistics Canada, 1994 International Adult Literacy Survey.

## Educational attainment has improved over generations

Educational mobility – that is, the difference in educational attainment between parents and their children – is common in Canada. In 1994, about half (51%) of Canadian respondents aged 26 to 35 reported having a higher level of education than their parents (upward mobility), just under 34% had the same level, while the rest (16%) had less formal schooling.

Because the upward trend is dominant, the average level of educational attainment in Canada has been rising over time. The lower the level of one's parents' education, the greater the scope for increasing one's own level, and so the rate of upward mobility accelerates. For example, 84% of 26- to 35-year-olds whose parents had not completed secondary school had gone further in their own education. Compulsory school attendance has had a significant influence on this achievement.

The rise in the general level of education throughout society has improved the intellectual capital available to the next generation. However, it remains true that the higher the parents' level of education, the more likely that the child will pursue further studies. Young adults aged 26 to 35 were close to three times more likely to earn postsecondary credentials if their parents had a postsecondary education than if their parents had not completed high school.

## CANADIAN SOCIAL TRENDS BACKGROUNDER

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### What you should know about this study

This article uses data from the International Adult Literacy Survey (IALS) for Canada, conducted among 5,660 individuals in 1994.<sup>1</sup> It examines the likelihood that an adult has completed a postsecondary education (college or university), given their inherited intellectual capital. The analysis focuses on young adults aged 26 to 35 because most have completed their initial education and are at the beginning of their careers (sample size of 1,010, representing a population of about 5 million Canadians). Where a comparison over time is illuminating, the young adults are compared to older adults aged 46 to 55 (sample size of 658, representing 3.3 million Canadians). The older cohort is chosen because it is on average 20 years, or an "educational generation," older and is still in the labour market. Since this study is concerned about the most recent level of education attained, the negligible percentage of those respondents still in school was excluded from the analysis.

The size of the sample restricts the analysis to only four levels of education for children (incomplete secondary, secondary, postsecondary non-university, and university) and three for their parents (incomplete secondary, secondary, and postsecondary). This may result in some blurring of the extent of educational mobility. For example, a child with a university degree will be defined as having more education than a parent who also has a university degree (since

postsecondary for parents includes both college and university); similarly, a child with a college diploma will be defined as having the same educational attainment as a parent with a university degree.

**Inherited intellectual capital:** in this study, it is represented by the education of the parent with the highest level of educational attainment (mother or father) and the socio-economic status of the father's occupation.

**Socio-economic status of occupations (SES):** an index that measures the "importance" of an occupation relative to others. It is calculated for 21 groups of occupations based on three variables: the average level of education of workers, the average income and the percentage of women in the occupation.<sup>2</sup> The index ranges from a low of 25 (Fishing occupations) to a high of 62 (Natural science and Teaching occupations). In-between lie such occupations as Management, Social Science and Medicine (56 to 57), Mining and Machining (41 to 42) and Clerical and Sales (37 to 38).

<sup>1</sup> For more information about the IALS and its findings, see "Adult Literacy in Canada, the United States and Germany," *Canadian Social Trends*, Winter 1996.

<sup>2</sup> The calculation is based on the method developed by Bernard R. Blishen, William K. Carroll and Catherine Moore, "The 1981 Socio-economic Index for Occupations in Canada," *Canadian Review of Sociology and Anthropology*, Vol. 24, no. 4; 1987.



### Fathers with high-status occupation have a positive effect

Parents also contribute to their child's education by passing on attitudes and expectations, providing encouragement and opportunities to learn, helping outside the classroom, standing as positive role models and so on. These elements of the family's intellectual capital arise not only from the parents' education but also from their life experience. If a parent's education is important to a child's educational attainment, what role might his occupation play? Specifically, might fathers with higher status occupations have children with higher educational qualifications?

Indeed, the data strongly suggest that the socio-economic status (SES) of the father's occupation is associated with their children's educational attainment. Men with low levels of education whose children have postsecondary credentials had, on average, higher status occupations. For example, the average SES score for fathers who had not finished high school was 35; but the SES was 39 for those whose children had a university degree, and only 33 for those whose children had not completed high school.<sup>1</sup> In contrast, fathers with a good education who worked in an occupation with below-average status for their level of schooling were more likely to have children with lower educational attainment.<sup>2</sup>

### Creating an environment for education achievement

The International Adult Literacy Survey (IALS) data cannot directly address how intellectual capital may be inherited, but they do offer some hints. Intellectual capital can be transmitted through the use of educational "investment strategies" that parents use to encourage their children to learn. The IALS does capture data on a number of activities that may be considered useful proxies for the parents' desire to further their children's education: buying books for their children, setting aside time to

read and limiting time spent watching television.

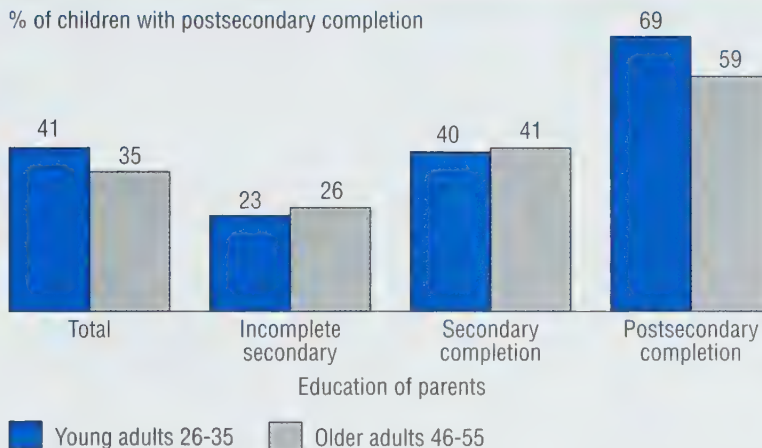
By and large, parental support of children's education reproduces the parents' own educational background. The strongest relationships are between education, reading and academic performance. Parents with a college or university education are more likely to buy books for their

children, perhaps because they often have higher incomes and can afford to purchase books; while less affluent families may borrow books for their children from the library. However, parents with a university degree have a much greater probability of reading to children, and this habit is not necessarily linked to income levels.

### The probability of earning a diploma or degree is highest for young adults whose parents also have a postsecondary education<sup>1</sup>

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% of children with postsecondary completion



<sup>1</sup> Parent with highest level of educational attainment.

Source: Statistics Canada, 1994 International Adult Literacy Survey.

### Whatever their own education, fathers in higher status occupations were more likely to have children with high education<sup>1</sup>

CST

Child's level of education

	Total	Incomplete secondary	Secondary completion	Post-secondary, non-university	University
<b>Father's average SES score<sup>2</sup></b>					
Did not complete secondary	35	33	36	35	39
Completed secondary	42	38	40	43	45
Postsecondary	48	44	48	47	50

<sup>1</sup> Includes all respondents for whom data are available.

<sup>2</sup> Value for lowest SES = 25, highest SES = 62.

Source: Statistics Canada, 1994 International Adult Literacy Survey.

<sup>1</sup> The values for socio-economic status of the fathers' occupation ranged from a low of 25 to a high of 62. With only 37 points' difference between the lowest and the highest SES, a difference of 6 points is quite substantial.

<sup>2</sup> Unfortunately, the sample size is too small to perform this analysis for both cohorts separately to see whether the influence of the father's occupation has changed over time. However, results of the regression analysis (see "Factors that influence years of schooling") would suggest that its importance has declined.



No group of parents seems more inclined than any other to limit the time spent watching TV, but TV time would be reduced by other activities (such as reading) without any need for parental

intervention. About one child in two starts reading before entering Grade 1, regardless of the parents' education; this is probably the result of experiences that cut across the educational background of

parents, such as daycare, junior kindergarten or educational television programs. However, parents with university are least likely to have children who are behind at school.<sup>3</sup>

## CANADIAN SOCIAL TRENDS BACKGROUNDER

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### Factors that influence years of schooling

A number of factors can influence the educational attainment of children. These factors include gender, parents' highest level of educational attainment, father's occupation, mother's participation in the paid workforce, and immigrant status. The table below shows the effect of some of these characteristics — measured in terms of the difference in average years of formal schooling — when the influence of all other factors is taken into account.

The higher level of education that used to be enjoyed by men — men aged 46 to 55 had over two-thirds of a year more formal schooling than women their age — has disappeared among younger adults. Although gender may no longer matter, parental education does: young adults aged 26 to 35 whose parents did not complete high school have one less year of schooling than those whose parents graduated from high school.

A man's occupation has a strong effect on the years of education his children receive, and the impact was much greater on older than younger adults. Compared with 46- to 55- year olds whose fathers were skilled agricultural workers, others in this age group had almost 6 years more schooling if their fathers had been professionals, and 3.5 years more if their fathers had been managers. In the next generation (aged 26 to 35), the advantage had dropped to less than two more years for children of professionals and just over one more year for children of managers. Meanwhile, people whose mothers had worked for pay acquired about half (aged 46 to 55) to one (aged 26 to 35) more year of education than those whose mothers had not been not employed outside the home.

#### Impact of various factors on number of years of education <sup>1</sup>

	Young adults 26-35	Older adults 46-55
	(Average number of years)	
<b>Base number of years of education</b>	<b>12.8</b>	<b>11.9</b>
Male	-0.1	0.7
Female	--	--
<b>Parent's education<sup>2</sup></b>		
Incomplete secondary	-1.0	-1.4
Secondary completion	--	--
Postsecondary	1.2	-0.4*
<b>Father's occupation</b>		
Armed Forces	4.3	-1.4*
Manager	1.3	3.5
Professional	1.9	5.9
Technician	0.2*	3.0
Clerk	1.2	3.4
Service worker	-0.1*	1.7
Skilled agricultural worker	--	--
Craft worker	-0.8	1.3
Plant & machine operator	-0.6*	0.9
Elementary occupations	-1.1	0.7*
Never worked	3.0*	0.0
<b>Mother's labour force status</b>		
Mother worked	0.9	-0.5
Mother did not work	--	--
<b>Region</b>		
Outside Canada	-0.9	0.7*
Atlantic	-0.1*	-1.5
Quebec	-0.4*	-2.3
Ontario	--	--
West	-0.5	0.1*

-- sample too small to produce reliable estimate.

\* Not statistically significant.

<sup>1</sup> Reference group shown in italics. Values for all other groups in the category are shown compared to the reference group.

<sup>2</sup> Parent with highest level of educational attainment.

Source: Statistics Canada, 1994 International Adult Literacy Survey.



It seems that parents with higher levels of education are more likely to set their children on the path to educational success. However, this finding should be interpreted with caution, because the data were collected only for children aged 6 to 18 years, and provide no information about the final outcomes of parents' educational strategies, that is, whether the children completed a post-secondary education.

**Summary** It does appear that parental education plays a significant role in children's ability to match or improve upon their parents' educational attainment. Most probably, this occurs because the learning environment in the home reflects the parents' own academic background. However, it seems that a parent with little formal schooling but a high socio-economic status occupation can also see his children earn high level educational qualifications. This finding suggests that parents provide a sound learning environment for their children — extracurricular activities, books, lessons and so on<sup>4</sup> — if they can afford to do so.

In other words, financial stability is an important agent in the transmission of intellectual capital.

If the family cannot transmit intellectual capital, is the education system able to provide equal educational opportunities to all? An education policy is a powerful instrument to influence human capital formation, but other public policies that recognize the link between low education and low income also play an important role. Such programs could help young low-income parents to complete their higher education, find adequate day care facilities, obtain career counseling and integrate into the labour market.

Recently, a Canadian university advertised on a commercial billboard with these words:

*Not everyone inherits the family business. No one's about to hand you your future.*

Rather, to a large extent, it seems that your future is in the hands of your parents.

<sup>3</sup> Defined as being at least two years behind the normal grade for their age.

<sup>4</sup> See "The social context of school for children," *Canadian Social Trends*, Winter 1997.

• This article is adapted from "Intergenerational Aspects of Education and Literacy Skills Acquisition," *Labour Markets, Social Institutions, and the Future of Canada's Children*, Statistics Canada, Catalogue Number 89-553-XPB.

**Patrice de Broucker** is chief of Integration, Analysis and Special Projects, Centre for Education Statistics, Statistics Canada, and **Laval Lavallée** is a consultant with Vestimetra International Inc.

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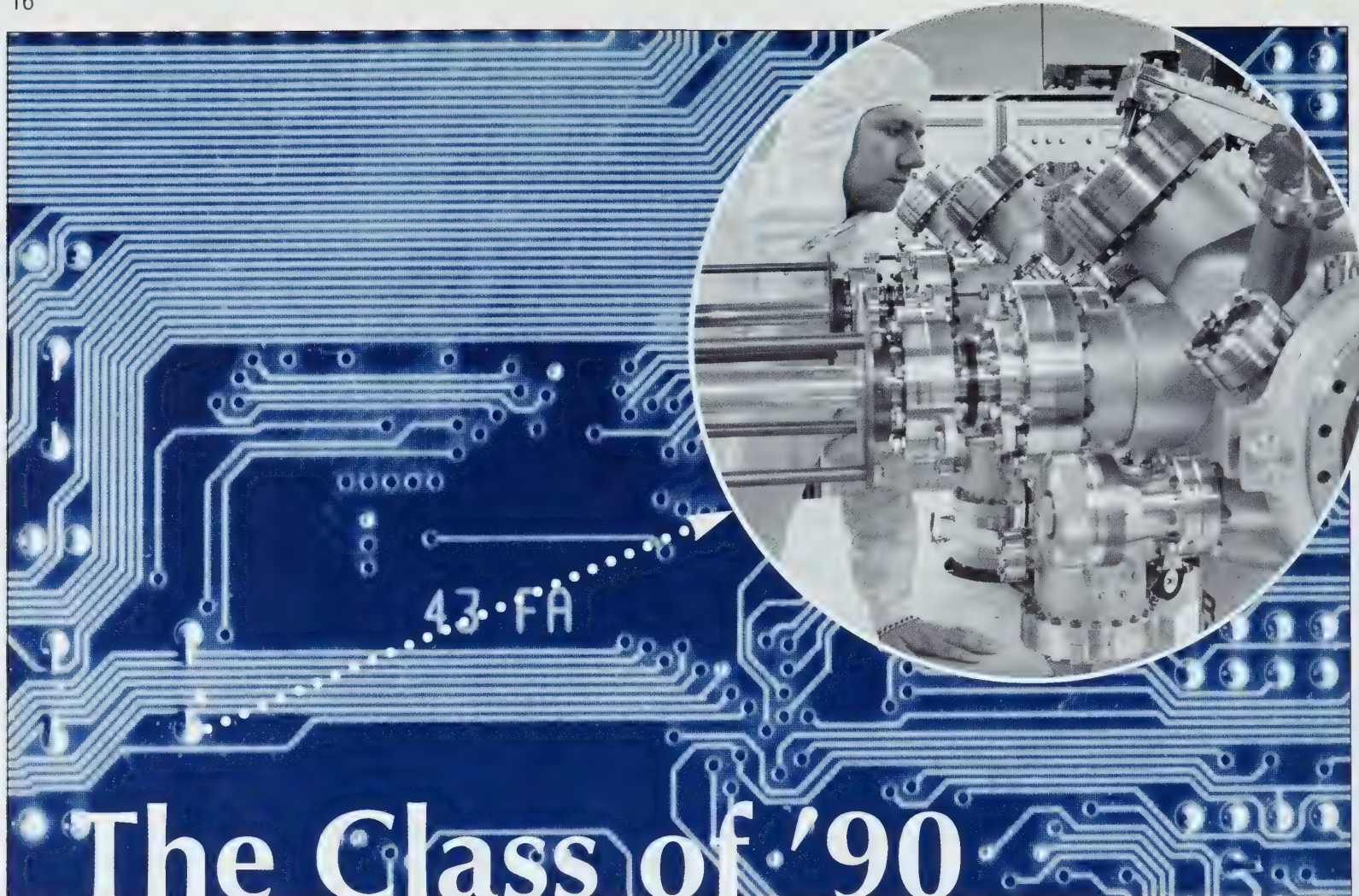
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# The Class of '90 Goes to Work

by Michael Paju

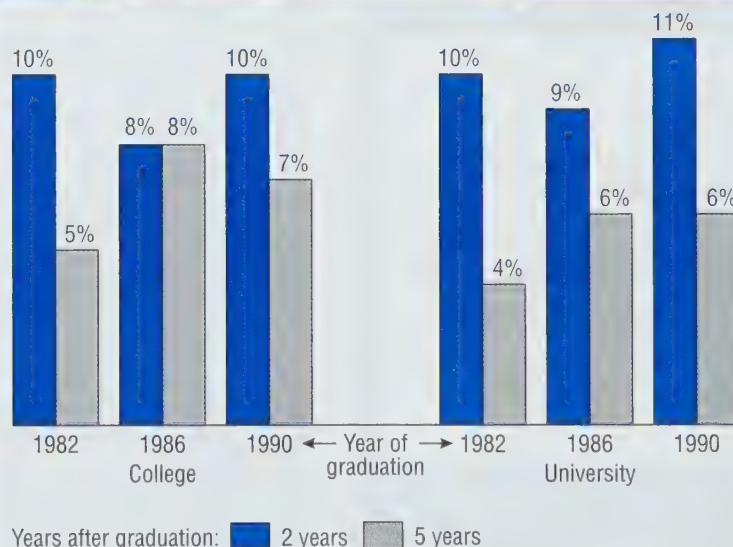
**Y**oung people graduating from universities and colleges are at the point in their lives where they make several important transitions, from school to work, from youth to adulthood and from dependence on parents to independence. The success of their transition from school to work depends on many factors, including previous work experience, academic achievement, field of study, location, graduates' commitment to continued learning and the prevailing economic climate and labour market conditions at the time of graduation.<sup>1</sup>

This article traces the 1990 class of university and college graduates over a five-year transition period from school to work. It indicates that the transition is marked by a progressive settling into the labour market, with improved employment and earnings accruing over time.

<sup>1</sup> Timothy F. Hartnagel and Harvey Krahn, "Labour market problems, and psychological well-being: a panel of Canadian youth in transition from school to work", *British Journal of Education and Work*, Volume 8, Number 3, 1995.

Unemployment rates decline as graduates obtain more work experience

CST



Source: Statistics Canada, 1992 National Graduates Survey and 1995 Follow-up of 1990 Graduates Survey.



**Employment improves for graduates as they settle into the labour market** Changing economic conditions affect young people more than older adults. When competing in a difficult labour market, young workers are often at a disadvantage because they lack seniority, job security and previous work experience. During recessionary periods such as the early 1990s, young people experience greater increases in their unemployment rates than adults.

Most graduates from the class of '90 were working full-time two years after graduation and their labour market success continued into the mid-1990s. Some university and college graduates had difficulty competing for full-time jobs after graduation as the country entered a recessionary period in the early 1990s. However, as the economy improved in the mid-1990s, so did the labour market prospects for the class of '90. This experience is similar to that of the class of '82, which also faced unfavourable economic conditions when they graduated during a recessionary period. In contrast, the class of '86 was fortunate to graduate when a rapidly growing economy allowed for a smoother transition into the labour force. Nonetheless, two years after graduation, the classes of '82, '86 and '90 all had unemployment rates in the 8% to 11% range, which improved to the 4% to 8% range at five years after graduation.

**Unemployment rates drop** The class of '90 university and college graduates took advantage of the economic recovery from 1993 to 1995 as conditions improved. Unemployment rates dropped between 1992 and 1995 for all graduates, except college graduates from health sciences and related studies, whose rate of unemployment remained the lowest among college graduates.

The unemployment rates for university graduates were almost half the level they had been in 1992, indicating that given more time, and with improved economic conditions, graduates do find work. However, it is possible that unemployment rates had been atypically high earlier because 15% of 1990's graduates had gone on to pursue further studies, thus delaying their entry into the workforce by several years.

**Involuntary part-time work declines between 1992 and 1995** Graduates may feel that the jobs they hold are inferior if they want full-time, permanent jobs and cannot find them. In 1992, 10% of 1990 university and college graduates were working part-time and 52% of these part-timers would have preferred a full-time job. In 1995, 9% worked part-time, but only 37% did so involuntarily. By 1995, over half of university and college graduates who had worked part-time involuntarily in 1992 had found full-time work. This drop in involuntary part-time work suggests that the labour market was able to provide more graduates with the volume of work and job security that they wanted.

### Graduates from most fields of study had lower unemployment rates in 1995 than in 1992

CST

#### College

(Unemployment rates – %)

	June 1992	June 1995
<b>Total – all fields of study</b>	<b>10</b>	<b>7</b>
Arts	15	8
Business and commerce	10	7
Engineering and applied sciences	12	7
Health sciences and related studies	3	3 <sup>1</sup>
Natural sciences and primary industries	12	9
Social sciences and services	10	6

#### University

(Unemployment rates – %)

	June 1992	June 1995
<b>Total – all fields of study</b>	<b>11</b>	<b>6</b>
Agriculture and biological sciences	14	9
Commerce, management and administration	8	4
Education	8	3
Engineering and applied sciences	11	5
Fine and applied arts	15	12 <sup>1</sup>
Health professions	5	3
Humanities	14	9
Mathematics and physical sciences	11	6
Social sciences	12	6

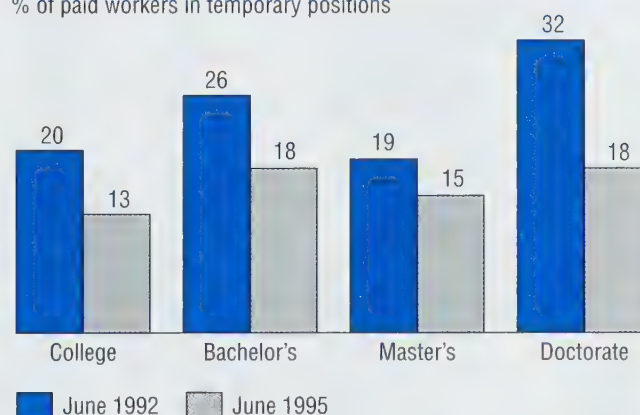
<sup>1</sup> numbers are less reliable than unmarked numbers.

Source: Statistics Canada, 1992 National Graduates Survey, 1995 Follow-up of 1990 Graduates Survey.

### Fewer members of the class of '90 were in temporary jobs 5 years after graduation

CST

% of paid workers in temporary positions



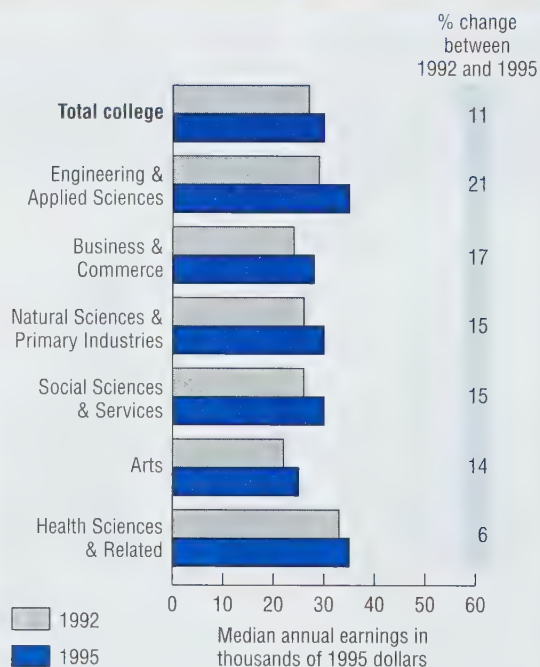
Source: Statistics Canada, 1992 National Graduates Survey, 1995 Follow-up of 1990 Graduates Survey.





### Engineering and applied sciences graduates had the greatest gain in earnings among college graduates between 1992 and 1995

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Source: Statistics Canada, 1992 National Graduates Survey, 1995 Follow-up of 1990 Graduates Survey.

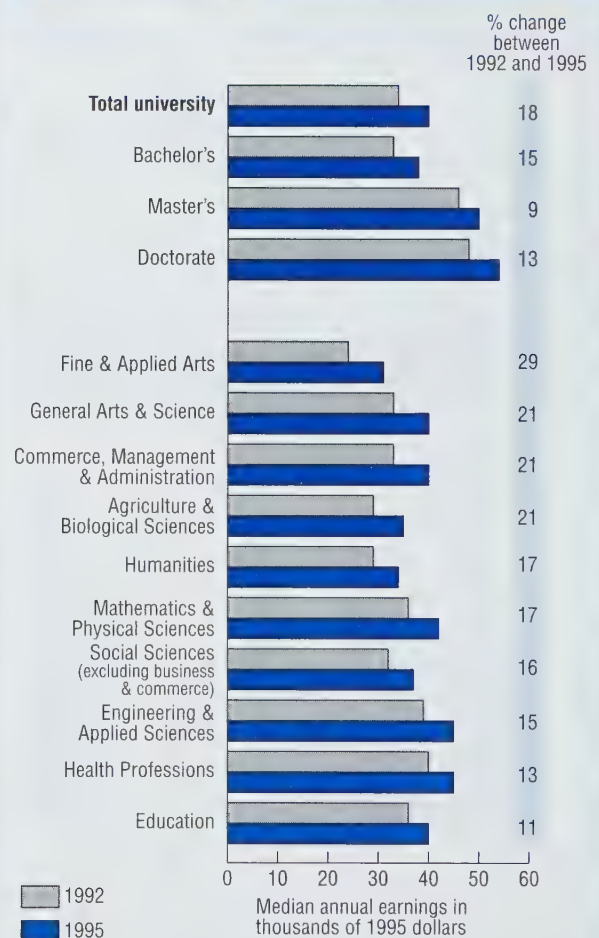
**More 1990 graduates had permanent jobs in 1995** Most graduates seek permanent long-term employment that uses their skills and matches their educational qualifications. Some, however, seek temporary jobs in order to balance employment with other activities such as raising children, attending school or travelling. In 1992, 23% of the class of '90 university and college graduates worked in temporary jobs and 56% of them did so because they could not find permanent employment. By 1995, 15% of 1990 university and college graduates held temporary positions.

The perception that the temporary jobs held by recent university and college graduates require limited skills is erased by the fact that, in 1995, almost two in three 1990 university graduates and one in three college graduates in temporary jobs worked in professional or semi-professional occupations.<sup>2</sup>

Furthermore, most graduates with temporary jobs worked full-time. Graduates may enter temporary jobs because they have longer term career plans and accept temporary positions that may lead to better jobs later on. Many graduates also feel that these temporary positions may eventually become permanent

### Fine and applied arts university graduates had the lowest earnings in 1995 but showed the greatest percentage increase from 1992

CST



Source: Statistics Canada, 1992 National Graduates Survey, 1995 Follow-up of 1990 Graduates Survey.



as demand for their services increases. The labour market is also changing as "outsourcing"<sup>3</sup> of jobs by governments and corporations becomes more common creating more temporary jobs.

**Class of '90 earned more five years later** During the early 1990s, the average earnings of full-time full-year workers stagnated. Despite these conditions, graduates from the class of '90 earned more in 1995 than they did in 1992 even after adjusting for inflation.

Engineers and health professionals graduating from colleges and universities were the top earners in 1995. College level engineers and health professionals earned about \$35,000 in 1995, while university level engineers and health professionals earned about \$45,000. For college level engineers this represented a 21% increase from 1992, the greatest increase among college graduates.

In contrast, university graduates of fine and applied arts had the lowest earnings in both 1992 and 1995, but reported the greatest percentage increase (29%). Annual earnings for university graduates with general arts and sciences or commerce degrees increased 21% during this same time period, pushing their earnings to within \$5,000 dollars of the highest-earning 1990 graduates in 1995.

**Pursuing further studies** Many graduates delayed their entry into the labour market to pursue additional education. The 1995 Follow-up Survey shows about half of the class of '90 university and college graduates pursued additional education after graduation. By 1995, graduates who received additional qualifications

during the five years after graduation had an unemployment rate that was about two percentage points lower than other graduates from the class of '90.<sup>4</sup>

The pursuit of additional qualifications after graduating in 1990 extended the transition from school to work for many graduates and may partially explain why graduates are less successful in the labour market in the short term than they are after five years. Data for temporary jobs in 1992 may reflect many graduates who were combining studies with work or were working between semesters at university or college.

**Summary** Most graduates from the class of '90 were working full-time two years after graduation and continued to do so into the mid-1990s. Some of these graduates did find it difficult to compete for full-time positions immediately after graduation as the country entered another recessionary period; however, as the economy changed and labour market conditions improved, so did the job prospects of these graduates.

The transition from school to work is a progressive settling into the labour market with improving employment and earnings over time. The initial findings of the 1995 Follow-up Survey of 1990 Graduates indicate that despite the recession of the early 1990s, the class of '90 moved just as successfully into the labour market as did the graduates of 1982 and 1986.

<sup>2</sup> Identification of professional and semi-professional workers was based on Peter C. Pineo, John Porter, Hugh A. McRoberts, "The 1971 Census and the socioeconomic classification of occupations," *Canadian Review of Sociology and Anthropology*, Vol. 14, No. 1, 1977, pp. 91-102.

<sup>3</sup> The procurement of services or products from an outside supplier, contractor or manufacturer.

<sup>4</sup> Lower unemployment rates for those who pursued further studies may or may not be influenced by the additional studies.

• This article was adapted from "The Class of '90 Revisited — Report of the 1995 Follow-up Survey of 1990 Graduates", Statistics Canada Catalogue no. 81-584-XPB and Human Resources Development Canada, Catalogue no. SC-082-10-97. This publication is available through the Internet at: <http://www.hrdc-drhc.gc.ca/hrdc/corp/stratpol/report2.pdf>.

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**CST**

## CANADIAN SOCIAL TRENDS BACKGROUNDER

**CST**

### What you should know about this study

The National Graduates Surveys and Follow-up Graduates Surveys covers university, college and trade/vocational graduates from programs lasting 3 months or longer. The surveys are conducted by Statistics Canada in partnership with Human Resources Development Canada, and are designed to obtain information on the following key areas: the relationship between education, training and labour market activities; the long-term labour market experiences of graduates; the employment, earnings and occupations of this key group; and graduates' additional educational experiences and qualifications.

This article is based on the 1995 Follow-up Survey of 1990 Graduates, which re-interviewed 24,000 university and college graduates originally interviewed in 1992 by the National Graduates' Survey of 1990 Graduates.<sup>1</sup> The analysis excludes trade/vocational graduates.

<sup>1</sup> Excludes graduates from private postsecondary colleges.





# Drinking and driving: have we made progress?

Impaired driving continues to be a subject of considerable concern. Traffic accidents are the primary cause of death for 15- to 19- year-olds and the second leading cause of death for 20- to 44- year-olds. In 1995, more than 3,600 persons died in traffic accidents in Canada. In all too many instances, the drivers had been drinking before taking the wheel.

This article looks at impaired driving charges, alcohol use among fatally injured drivers and attitudes towards drinking and driving to examine the change in this behaviour over the last 15 years. In addition, it reviews the most recent data available for provinces and major metropolitan areas.

**by Sylvain Tremblay and Anna Kemeny**



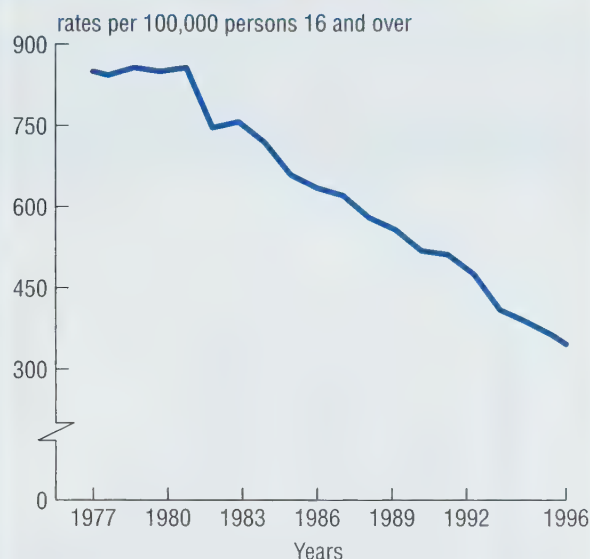
**Impaired charges continue to decline** Over the years, federal and provincial governments, community groups, research organizations and police have joined forces in the fight against drinking and driving. Since the last major amendments to the Criminal Code were made in 1985, new regulations, advertising campaigns, lobbying activities and special preventive programs have been implemented to combat this behaviour. And although drinking and driving continues to be a serious social problem, when compared with 15 years ago, it appears that some progress has been made.

Between 1983 and 1996, both the number and the rate of persons charged with impaired driving under the Criminal Code declined steadily. Only about half as many people were charged by police in 1996 as in 1981: 79,000 versus 154,000.

**Impaired driving varies across the country** Not unlike other social problems, drinking and driving appears to have regional dimensions. On the one hand, the rate of impaired driving charges (calculated per 100,000 persons 16 years and over) declined substantially in every province and territory between 1991 and 1996; on the other, the rates consistently showed a substantial difference, ranging (in 1996) from a low of 265 in Newfoundland to a high of 718 in Saskatchewan. The two territories topped the scales, with rates of 1,074 in the Yukon and 766 in the Northwest Territories. The reasons for these regional differences are not clear. However, factors such as social drinking

### Impaired driving charges decline for 13th straight year

CST



Source: Statistics Canada, Revised Uniform Crime Reporting Survey.

## CANADIAN SOCIAL TRENDS BACKGROUNDER

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### Do fewer charges mean fewer impaired drivers?

Impaired drivers are generally caught by proactive police intervention such as roadblocks, routine checks and arrests for other traffic violations. It has been argued that declining rates of impaired driving charges do not mean that fewer people drive drunk, but simply that fewer are getting caught. However, the assumption that enforcement in general is down is difficult to substantiate, because no provincial or national statistics are kept on these programs. And while some regions report that fewer police officers are carrying out enforcement programs, others claim not to have experienced changes.

On the other hand, there is compelling evidence that because of harsher penalties, prohibitive insurance costs, intensified community group efforts, and growing public awareness concerning the dangers of impaired driving, more people think twice before having "another one for the road." In Ottawa-Hull, for example, the number of charges has fallen by one-third since 1991, yet local officials of the Reduce Impaired Driving Everywhere (RIDE) program say enforcement strategies have not changed substantially

during this time. Other factors, therefore, should be considered to explain the decline.

One major factor is the drop in the number of people who report that they drink and drive. The proportion of current drinkers who reported driving after consuming two or more drinks in the previous hour dropped steadily from 53% in 1983 to 17% in 1994.<sup>1</sup> Although societal expectations at least partly influence what people will admit to, self-reported rates nonetheless reflect actual behaviour. During the past decade, various surveys have examined people's behaviour, knowledge and attitudes regarding drinking and driving. The results have shown that most Canadians are aware of and concerned about the problem, and millions take action to ensure that they personally are not impaired or to prevent others from drinking and driving. For example, in 1994, some 47% of Canadian adults drove someone home who, in their opinion, had had too much to drink.

<sup>1</sup> Traffic Injury Research Foundation and Health Canada. *National Survey on Drinking and Driving 1988 — Technical Report*. Ottawa, 1992, p. 27; Health Canada and Statistics Canada, *Canada's Alcohol and Other Drug Survey*, 1994.



## Impaired charges continue to decrease

Year	Persons charged	Population aged 16 and over 000	Rate per 100,000 population <sup>1</sup>
1986	128,797	20,311	634
1987	128,030	20,635	620
1988	121,178	20,931	579
1989	118,722	21,330	557
1990	112,161	21,646	518
1991	111,917	21,915	511
1992	105,805	22,282	475
1993	92,531	22,631	409
1994	88,582	22,900	387
1995	84,085	23,230	362
1996	78,894	23,561	335

<sup>1</sup> Rates are calculated per 100,000 persons aged 16 and over.  
Source: Statistics Canada, Revised Uniform Crime Reporting Survey.

patterns, the availability of public transportation, the organization of road systems, and the age distribution of the population undoubtedly exert their influence on both levels and patterns of drinking and driving.

An examination of census metropolitan areas (CMAs) reveals a similarly varied picture. Between 1991 and 1996, the rate of persons charged with impaired driving offences fell — once again significantly — in eight of the nine largest metropolitan areas. The exception was Quebec City, where the rate in 1996 was virtually identical to that in 1991. During these years, Edmonton consistently reported the highest rate, while Toronto recorded the lowest.

**Small minority responsible for most serious offences** Impaired drivers may be caught by police under various circumstances: accidents (which may or may not include injury or death), traffic violations, routine road checks or suspected driving problems.

In 1996, in the vast majority (93%) of cases, people were charged with operating a motor vehicle with a blood alcohol concentration (BAC) exceeding the legal limit of 80 milligrams per 100 milliliters of blood. An additional 5% were charged with refusing to provide a breath or blood sample, an offence which automatically leads to the same penalty as a first impaired charge.

The remaining 2% of charges comprised the more serious offences of impaired driving causing bodily harm or death. Fatalities are, of course, the most devastating consequence of drinking and driving. In 1996, a total of 133 persons were charged with impaired driving causing the death of someone else, a number that has stayed relatively constant during the 1990s.

## CANADIAN SOCIAL TRENDS BACKGROUNDER

### What you should know about this study

**Revised Uniform Crime Reporting (UCR) Survey.** The Canadian Centre for Justice Statistics (CCJS), in cooperation with the policing community, collects detailed information on police-reported criminal incidents through the Revised UCR survey. In 1996, 154 police departments in six provinces, representing 49% of all persons charged with impaired driving, responded to the survey. However, because the participating police forces represent a non-random sample, the incidents reported are not nationally representative.

**National Survey on Drinking and Driving (NSDD)** NSDD was conducted in 1988 by Statistics Canada for the Health Promotion Directorate of Health Canada. This telephone survey of almost 10,000 Canadians between the ages of 16 and 69 (excluding residents of the Yukon and Northwest Territories) is the largest and most comprehensive survey on Canadians' attitudes toward drinking and driving, and their practices and prevention tactics. Additionally, it assessed the

level of awareness of, experience with, and support for, activities aimed at reducing drinking and driving.

**Canada's Alcohol and Other Drugs Survey (CADS)** CADS was conducted in 1994 by Statistics Canada on behalf of Health Canada to update the 1989 National Alcohol and Other Drugs Survey (NADS). NADS was the first Canadian survey with a central focus on alcohol and other drug issues, designed to provide a benchmark data on substance abuse, which could then be compared with subsequent results to establish trends. Both surveys examined the prevalence and patterns of alcohol and other drug use in Canada; the harm and other consequences associated with their use; factors that may lead to substance abuse; attitudes towards users and problem behaviours; and factors leading to the reduced use of alcohol and other drugs. Canadians in over 12,000 households were interviewed (excluding residents of the Yukon and Northwest Territories and full-time residents of institutions).



**Drinking drivers have more reckless attitude** The 1988 National Survey on Drinking and Driving (NSDD), the most recent Canadian attitudinal survey on this topic, found significant differences in the attitudes of "drinking drivers" — people who drove after drinking — and "non-drinking drivers"— those who had not.<sup>1</sup> Generally, drinking drivers drank heavily more frequently and demonstrated a tendency toward risk-taking behaviour. They were more than twice as likely as non-drinking drivers to agree that it took a "lot of drinks", that is five or more per drinking occasion, to make them feel impaired (39% versus 17%). And while 31% believed that one or two drinks would put them over the legal limit, only 18% felt that this amount would impair their ability to drive. Clearly, some see a difference between what is legally regarded as unsafe and what they believe affects their skills.

These attitudes are reflected in their behavior behind the wheel. Drinking drivers were more likely to get ticketed for various traffic violations, were involved in more collisions, were less likely to use seat belts and contended with more alcohol-related problems than others.<sup>2</sup>

**Men most likely to drink and drive** The vast majority of persons charged with impaired driving continues to be men. Surveys on drinking and driving have found that men are about three times more likely than women to admit engaging in this behaviour. Nonetheless, women have come to account for a larger share of impaired charges than they did 15 years before. Between 1981 and 1996, their proportion increased from 6% to 11%, primarily because

<sup>1</sup> Drinking drivers comprised those who reported driving after drinking two or more drinks in the previous hour during the 12 months preceding the survey.

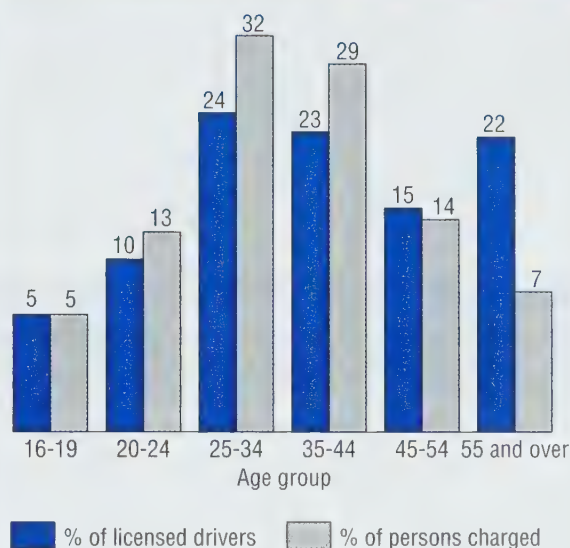
<sup>2</sup> Traffic Injury Research Foundation and Health Canada. *National Survey on Drinking and Driving 1988 — Technical Report*. Ottawa, 1992, p.27-30.

the number of men charged with drinking and driving has fallen faster than the number of women charged with this offense.

### Younger adults over-represented among drunk drivers

Although public opinion often associates teenagers with impaired driving, the latest statistics indicate that it is people

**25- to 34- year-olds account for highest share of impaired charges** CST



Source: Revised Uniform Crime Reporting Survey 1996.

## CANADIAN SOCIAL TRENDS BACKGROUNDER

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### Did you know?

Even at blood alcohol content levels (BAC) as low as 20 mg, alcohol affects driving ability and the likelihood that the vehicle will be involved in a crash. The probability of a crash begins to increase significantly at 50 mg and climbs rapidly after about 80mg.

How much alcohol a person can drink before reaching a specific blood alcohol level depends on a number of factors. Given the same number of drinks, sipping a drink instead of gulping it will slow down the absorption of alcohol into the bloodstream, resulting in a lower BAC. Having a full stomach before drinking will have a similarly lowering effect. In addition, body weight based on height and sex, and the proportion of muscle and fat that make up that weight also influence peak BAC. The larger a person or the more muscle mass he/she has, the greater the

volume of blood in which the alcohol can be distributed and the lower the BAC. Men tend to have a higher proportion of muscle tissue than women. Therefore, the BAC of a 68kg (150 lb) man who has had four drinks in two hours is 86mg while the BAC of a woman of identical weight who has drunk the same amount is 105mg.

- 1 drink = 43 ml (1.5 oz.) of rum, rye, scotch, brandy, gin, vodka, etc.
- = 341 ml (12 oz.) of normal strength beer
- = 85 ml (3 oz.) of fortified wine
- = 142 ml (5 oz.) of table wine

Source: *Smashed — the magazine on drinking and driving*. Traffic Injury Research Foundation of Canada and Road Safety and Motor Vehicle Regulation Directorate, Transport Canada.



aged 20 and 44 who are substantially over-represented among those charged: while they make up 57% of all licensed drivers, they account for 74% of all impaired charges. In contrast, 16 to 19 year-olds represented only 5% of both persons charged and licensed drivers. Interestingly, the proportion of people who rated drinking and driving as a "very serious" or "serious" problem in their neighbourhood was considerably higher in the 20 to 44 year age group than in the 15 to 19 and 55 and over groups.

### Smaller percentage of drivers killed are legally impaired

More than half the people killed in traffic accidents in 1995 were drivers. The majority of drivers who died (85%) were tested for BAC, and just over one-third (35%) were found to be legally impaired at the time of the accident. In 1987, when about the same proportion of drivers who died were tested, this percentage was considerably higher, at 43%.

Despite the decline, data on fatalities among impaired drivers still give cause for concern. High blood alcohol concentration is strongly associated with the likelihood of serious accidents and

this group had drunk enough to become dangerously impaired. In 1995, the average BAC of fatally-injured drivers with any level of alcohol in their blood (1 mg and over) was about 170 mg, more than twice the legal limit.

In 1995, fatal driver accidents involving alcohol occurred most frequently among snowmobile drivers (41%). While 34% of automobile drivers and 32% of motorcyclists killed in accidents were legally impaired.

**Hard-core drinking drivers** According to some researchers, most traffic fatalities involving alcohol are the work of a hard-core group of drinking drivers. These are the people who frequently drive while seriously impaired, who resist changing their behaviour and who ignore the kinds of messages which keep social drinkers off the roads.

A 1996 study by the Traffic Injury Research Foundation indicated that although less than 1% of those behind the wheel on weekend nights are hard-core drinking drivers, their chances of being involved in a serious collision are hundreds of times

## Provinces develop tough response to impaired driving (as of January 1998)

	New-foundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
Transporting an open alcoholic beverage container within a motor vehicle	yes	yes	yes	yes	consumption only prohibited	yes	yes	yes	yes	yes
Impaired driving prohibited for vehicles other than specified in Criminal Code	no	bicycle and horse	no	no	no	no	bicycle and horse	no	no	bicycle
Driving prohibition for BAC below Criminal Code limit	24 hrs for 50 to 80 mg	24 hrs for 50 to 80 mg	no	24 hrs for 50 to 80 mg	no	12 hrs for 50 to 80 mg	24 hrs for 50 to 80 mg	24 hrs for 40 to 80 mg	24 hrs suspect levels under 80 mg <sup>5</sup>	24 hrs for 50 to 80 mg
Graduated driver's licence holders program <sup>1</sup>	no	term: 2 yrs tolerance: 0 mg <sup>2</sup>	term: 2 yrs tolerance: 0 mg	term: 2 yrs tolerance: 0 mg	term: 2 yrs <sup>3</sup> tolerance: 0 mg	term: 2 yrs tolerance: 0 mg	no <sup>4</sup>	term: 2 yrs tolerance: 0 mg	no	no
Minimum fixed suspension varying with frequency of offence	1st: 1 yr 2nd: 2 yrs 3rd: 3 yrs	1st: 1 yr 2nd: 2 yrs 3rd: 3 yrs	1st: 1 yr 2nd: 2 yrs 3rd: 5 yrs	1st: 6 mths 2nd: 1 yr 3rd: 1 yr	1st: 1 yr 2nd: 2 yrs 3rd: 3 yrs	1st: 1 yr 2nd: 2 yrs 3rd: 3 yrs	1st: 1 yr 2nd: 2 yrs 3rd: 5 yrs	1st: 1 yr 2nd: 3 yrs 3rd: 5 yrs	1st: 1 yr 2nd: 3 yrs 3rd: 5 yrs	1st: 1 yr 2nd: 3 yrs 3rd: indefinite
Administrative licence suspension	no	90 days	90 days	no	1st: 15 days other: 30 days	90 days	90 days	90 days	no	90 days <sup>6</sup>
Seizure and impoundment measure	no	yes	no	no	yes	yes	yes	yes	yes	yes

<sup>1</sup> Only program characteristics related to impaired driving are shown.

<sup>2</sup> Zero tolerance is applicable to new drivers under 18. 40 mg for all other drivers.

<sup>3</sup> Program is applicable only to new drivers under 25.

Source: Juristat, Statistics Canada, Catalogue no. 85-002-XPE, Vol. 17, no. 12.

<sup>4</sup> Currently under review for novice drivers.

<sup>5</sup> Any level, which, in the view of police, may impair driving ability.

<sup>6</sup> Technically, it's a driving prohibition.



greater than for other drivers<sup>3</sup>. Furthermore, there is no evidence that drinking and driving among this group is declining. With a "recidivism rate" for impaired driving (the rate at which the offence is repeated) in Canada estimated at 20% to 45%, the chances that a hard-core drinking driver will repeat the offence is considerable.<sup>4</sup> In an ongoing effort to combat the problem of repeat offenders, a number of provinces have established mandatory education, treatment and rehabilitation programs, and strengthened measures to deal with this group.

**Guilty verdict likely to follow impaired driving charges** Of all offences heard in criminal court, impaired driving was most likely to receive a guilty verdict. In 1995-96 approximately 80% of persons charged either entered a guilty plea or were found guilty; only 3% were acquitted, and the remaining cases resulted in a stay or withdrawal. The most common sentence imposed — received by 66% of almost 50,000 persons found guilty — was payment of a fine along with loss of driver's license; some 22% of persons charged went to prison and 9% were put on probation.

Under the Criminal Code, a first conviction of impaired driving causing neither bodily harm nor death results in a minimum fine of \$300 and a minimum three months' suspension of driver's license; a second offence commands minimum penalties of 14 days' imprisonment and a six-month license suspension. In the case of bodily harm or death resulting from impaired driving, the Criminal Code provides for maximum prison terms of 10 and 14 years, respectively.

**Summary** Road safety regulations and control — such as highway traffic acts, motor vehicle registration, and the issuing and control of driver's licenses — is a provincial jurisdiction. In the past few years, a number of provinces have introduced or amended acts and regulations in order to reduce the incidence

of impaired driving. Increasingly, offenders are required to pay all costs relating to their arrest, including towing and vehicle storage expenses, and often the cost of mandatory rehabilitation programs. Lastly, in addition to a criminal record, those convicted of impaired driving face substantially higher costs for licensing and insurance. By all accounts, Canadians support these changes. They favour tougher laws and more severe penalties for those who drink and drive.

Over the past 15 years, both the number and the rate of persons charged with impaired driving have been falling. During the same period, the percentage of people who reported driving after drinking has also declined. In addition, surveys of people's attitudes show that society views drinking and driving as a serious and socially unacceptable offence. Taken together, these factors suggest that drinking and then driving is becoming a less frequent occurrence. A combination of harsher federal and provincial legislation, more intense community initiatives and changing social attitudes has likely contributed to this downward trend.

<sup>3</sup> H.M. Simpson, D.R. Mayhew and D.J. Beirness, (1996) *Dealing with the hard core drinking driver*. Traffic Injury Research Foundation of Canada, Transport Canada, Ottawa.

<sup>4</sup> A.C. Donelson, (1989). "The alcohol-crash problem and its persistence: the need to deal effectively with the hard-core drinking driver". A paper presented to the 34<sup>th</sup> International Institute on the prevention and treatment of alcoholism, France.

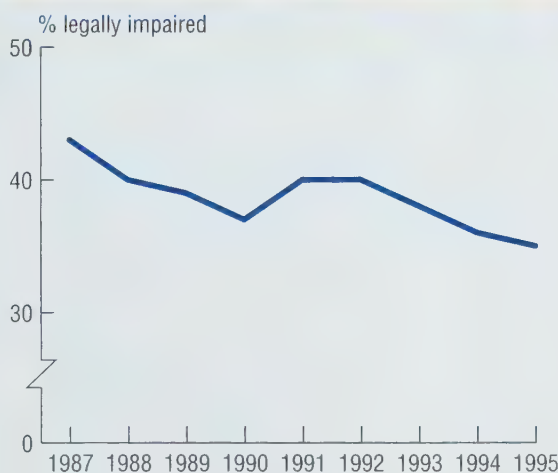
- This article is an adaptation of "Impaired driving in Canada, 1996", which appeared in *Juristat*, Statistics Canada, Catalogue no. 85-002-XPE, Vol. 17, no. 12.

**Sylvain Tremblay** is an analyst with the Canadian Centre for Justice Statistics and **Anna Kemeny** is an analyst with *Canadian Social Trends*, Statistics Canada.

**CST**

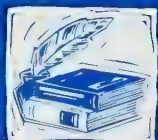
### Percentage of fatally injured drinking drivers is declining<sup>1</sup>

**CST**



<sup>1</sup> Excludes operators of bicycles, snowmobiles and other off-road vehicles. Source: D. R. Mayhew, S.W. Brown and H.M. Simpson, *Alcohol use among drivers and pedestrians fatally injured in motor vehicle accident, Canada, 1995*. Transport Canada, 1996.





## EDUCATORS' NOTEBOOK

*Suggestions for using Canadian Social Trends in the classroom*

Lesson plan for "Exposure to second-hand smoke"

### Objectives

- ☐ To identify health risks associated with exposure to second-hand smoke.
- ☐ To discover attitudes to exposure to second-hand smoke.

### Method

1. Provide each student with a copy of the article "Exposure to second-hand smoke"; have them read the article, selecting and recording key facts or ideas in point form.
2. Ask the class to identify some of the effects of second-hand smoke on non-smokers and indicate which group of non-smoking Canadians has the highest rate of exposure to second-hand smoke.
3. Discuss why non-smoking teens are more likely to be exposed to second-hand smoke than any other group of non-smokers.
4. Divide the class into smokers and non-smokers. Ask non-smokers if they are exposed to second-hand smoke, how often and where. Survey each group to determine what percentage are physically irritated by second-hand smoke. Compare the results with the national figures — 52% non-smokers and 21% of smokers are irritated by second-hand smoke. What percentage of non-smokers mind when people smoke in their presence?
5. Discuss what rules are in place to limit exposure to second-hand smoke at your school and in your community. Are stricter rules needed or greater enforcement of existing rules? What can be done to reduce exposure to second-hand smoke at school, at work, at home and in public places?
6. Follow-up activities could include asking the school nurse to talk to the students about the health risks of second-hand smoke.

### Using other resources

- ☐ Read "Youth Smoking in Canada" in the Winter 1996 edition of *Canadian Social Trends* to see what factors influence smoking among Canadian youth.
- ☐ Use the E-STAT CD-ROM from Statistics Canada to find data on smoking rates for 11-, 13- and 15-year-olds in other countries. Search in the CAN-SIM time series under the Topic "Health and Lifestyle" to find this information.



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# SOCIAL INDICATORS

	1990	1991	1992	1993	1994	1995	1996	1997
<b>POPULATION</b>								
Canada, July 1 (000s)	27,790.6	28,120.1	28,542.2	28,946.8	29,255.6 <sup>R</sup>	29,617.4	29,969.2	30,286.6
Annual growth (%)	1.5	1.2	1.5	1.4	1.1 <sup>R</sup>	1.2	1.2	*
Immigration <sup>1</sup>	202,979	219,250	241,810	265,405	234,457	215,470	208,791	*
Emigration <sup>1</sup>	39,760	43,692	45,633	43,993	44,807	45,949	47,230	*
<b>FAMILY</b>								
Birth rate (per 1,000)	15.3	14.3	14.0	13.4	13.2	12.9	12.5 <sup>E</sup>	*
Marriage rate (per 1,000)	6.8	6.1	5.8	5.5	5.5	5.4	5.2	*
Divorce rate (per 1,000)	2.8	2.7	2.8	2.7	2.7	2.6	2.4	*
Families experiencing unemployment (000s)	879	1,096	1,184	1,198	1,130	1,044	1,079	1,048
<b>LABOUR FORCE</b>								
Total employment (000s)	13,165	12,916	12,842	13,015	13,292	13,506	13,676	13,941
– goods sector (000s)	3,809	3,582	3,457	3,448	3,545	3,653	3,681	3,769
– service sector (000s)	9,356	9,334	9,385	9,567	9,746	9,852	9,995	10,172
Total unemployment (000s)	1,164	1,492	1,640	1,649	1,541	1,422	1,469	1,413
Unemployment rate (%)	8.1	10.4	11.3	11.2	10.4	9.5	9.7	9.2
Part-time employment (%)	17.0	18.1	18.5	19.1	18.8	18.6	18.9	19.0
Women's participation rate (%)	58.7	58.5	58.0	57.9	57.6	57.4	57.6	57.4
Unionization rate – % of paid workers	34.7	35.1	34.9	34.3	–	–	–	33.9
<b>INCOME</b>								
Median family income	45,618	46,389	47,199	46,717	48,091	48,079	49,411	*
% of families with low income (1992 Base)	12.3	13.0	13.5	14.6	13.5	14.5	14.5	*
Women's full-time earnings as a % of men's	67.7	69.6	71.9	72.2	69.8	73.1	*	*
<b>EDUCATION</b>								
Elementary and secondary enrolment (000s)	5,141.0	5,218.2	5,284.2	5,347.4 <sup>P</sup>	5,402.4 <sup>P</sup>	5,458.5 <sup>R</sup>	5,442.2 <sup>E</sup>	5,594.9 <sup>E</sup>
Full-time postsecondary enrolment (000s)	856.6	903.1	931.0	951.1 <sup>P</sup>	964.7 <sup>E</sup>	962.7 <sup>R</sup>	971.5 <sup>E</sup>	980.3 <sup>E</sup>
Doctoral degrees awarded	2,673	2,947	3,136	3,356	3,552	3,716 <sup>R</sup>	3,798 <sup>E</sup>	3,727 <sup>E</sup>
Government expenditure on education – as a % of GDP	5.8	6.3	6.4	6.2	5.9	5.7	7.4	*
<b>HEALTH</b>								
% of deaths due to cardiovascular disease – men	37.3	37.1	37.1	37.0	36.3	36.0	*	*
– women	41.2	41.0	40.7	40.2	39.7 <sup>R</sup>	39.3	*	*
% of deaths due to cancer – men	27.8	28.1	28.4 <sup>R</sup>	27.9	28.3	30.3	29.3 <sup>E</sup>	*
– women	26.8	27.0	27.3	26.9	27.0	27.3	27.9 <sup>E</sup>	*
Government expenditure on health – as a % of GDP	6.2	6.7	6.8	6.7	6.2	6.1	*	*
<b>JUSTICE</b>								
Crime rates (per 100,000) – violent	970	1,056	1,077 <sup>R</sup>	1,072	1,038 <sup>R</sup>	995	973	*
– property	5,593	6,141	5,868 <sup>R</sup>	5,524 <sup>R</sup>	5,212 <sup>R</sup>	5,235 <sup>R</sup>	5,192	*
– homicide	2.4	2.7	2.6	2.2	2.0	2.0	2.1	*
<b>GOVERNMENT</b>								
Expenditures on social programmes <sup>2</sup> (1995 \$000,000)	183,505.7 <sup>R</sup>	190,745.5 <sup>R</sup>	207,245.8 <sup>R</sup>	214,317.3 <sup>R</sup>	215,567.4	208,494.6	*	*
– as a % of total expenditures	56.0 <sup>R</sup>	56.8 <sup>R</sup>	58.5 <sup>R</sup>	60.0 <sup>R</sup>	60.1	58.3	*	*
– as a % of GDP	24.5 <sup>R</sup>	26.7 <sup>R</sup>	28.8 <sup>R</sup>	29.4 <sup>R</sup>	28.2	26.9	*	*
UI beneficiaries (000s)	3,261.0	3,663.0	3,658.0	3,415.5	3,086.2	2,910.0	*	*
OAS and OAS/GIS beneficiaries <sup>m</sup> (000s)	3,005.8	3,098.5	3,180.5	3,264.1	3,340.8	3,420.0	3,500.2	*
Canada Assistance Plan beneficiaries <sup>m</sup> (000s)	1,930.1	2,282.2	2,723.0	2,975.0	3,100.2	3,070.9	*	*
<b>ECONOMIC INDICATORS</b>								
GDP (1992 \$) – annual % change	–	–	+0.7	+2.5	+3.9	+1.9	+1.6	+3.9
Annual inflation rate (%)	4.8	5.6	1.5	1.8	0.2	2.1	1.6	1.6
Urban housing starts	150,620	130,094	140,126	129,988	127,346	89,526	101,804	123,221

– Not available

\* Not yet available<sup>P</sup> Preliminary data<sup>E</sup> Estimate<sup>m</sup> Figures as of March<sup>LR</sup> Revised intercensal estimates<sup>PD</sup> Final postcensal estimates<sup>PP</sup> Preliminary postcensal estimates<sup>PR</sup> Updated postcensal estimates<sup>R</sup> Revised data<sup>F</sup> Final data<sup>1</sup>For year ending June 30.<sup>2</sup>Includes Protection of Persons and Property; Health; Social Services; Education; Recreation and Culture.



### Small book publishers more likely to publish Canadian authors



Overall Canada's book publishing industry experienced a year of solid growth in 1994-95, with record levels of revenue and profits. However, small publishers (revenues less than \$250,000) collectively lost \$678,000. Small publishers differ from larger ones in other ways as well: they were much more likely to publish Canadian authors and to produce literary works, whether fiction or non-fiction. In addition, small publishers had proportionately more part-time staff, working proprietors and volunteers than their larger counterparts.

**Focus on Culture**, Winter 1997, Vol. 9, no. 4  
Statistics Canada, Catalogue no. 87-004-XPB

### Almost half of pregnant teenagers choose abortion



In 1994, close to 24,700 babies were born to teenage mothers aged 15 to 19. However, these births represented only about half of the 47,800 teenage pregnancies that year — an estimated 21,000 women in this age range had an abortion, while about 2,000 had a stillbirth or miscarriage. Although the teenage pregnancy rate was lower in 1994 than in 1974, the trend has been rising since the mid 1980's. The teenage pregnancy rate in 1994 was highest in Manitoba (64 pregnancies per 1,000 women aged 15 to 19) and lowest in Prince Edward Island (32 per 1,000).

**Health Reports**, Winter 1997, Vol. 9, no. 3  
Statistics Canada, Catalogue no. 82-003-XPB

### Victoria residents benefit most from tourism



In 1996, tourism directly generated \$1,400 for every man, woman and child living in the Victoria census metropolitan area (CMA). This was the highest per resident tourist spending in any of Canada's 12 CMAs which received more than one million overnight visits. Victoria enjoys a steady flow of visitors not just from Canada and the United States, but also from Europe and Asia. St. Catharines-Niagara received the second-highest tourism spending per resident, at \$1,300. Tourists eager to capture Niagara Falls on film reportedly buy more film here than anywhere else in the world. St. Catharines-Niagara is the only CMA where the majority of overnight visits by Canadians were made during pleasure trips (51%) rather than trips to visit friends or relatives.

**Travel-log**, Winter 1998, Vol. 17, no. 1  
Statistics Canada, Catalogue no. 87-003-XPB

### Car thefts continue to climb



Thieves drove away with a record 178,580 motor vehicles in 1996, a theft rate of about one in every 100 registered vehicles in Canada. While most property crimes have been declining in recent years, motor vehicle thefts have been rising steadily. The rate of these thefts has almost doubled since 1988 and was 10% higher in 1996 than in 1995. Over half of all vehicle thefts took place in parking lots. These are attractive locations to thieves as there is little chance of being detected.

**Juristat: Motor vehicle theft in Canada**, 1996, Vol. 18, no. 1  
Statistics Canada, Catalogue no. 85-002-XPE

### Cities and towns devour land



Canadian cities and towns expanded steadily between 1971 and 1996, gobbling up more than 12,250 square kilometres of land. This was an area greater than twice the size of Prince Edward Island and represented a 77% increase in urban land use. During this period the population grew only 37%. Much of the expansion occurred around smaller centres (populations under 100,000), where the area of urban land often doubled, frequently at the expense of good quality farmland. Part of this growth in urban areas was due to a 23% decline in population density over the period. Lower densities translate into increased land use for housing, transportation and other amenities.

**Econnections — linking the environment and the economy**  
Statistics Canada, Catalogue no. 16-200-XKE

### More seniors below low income cut-offs



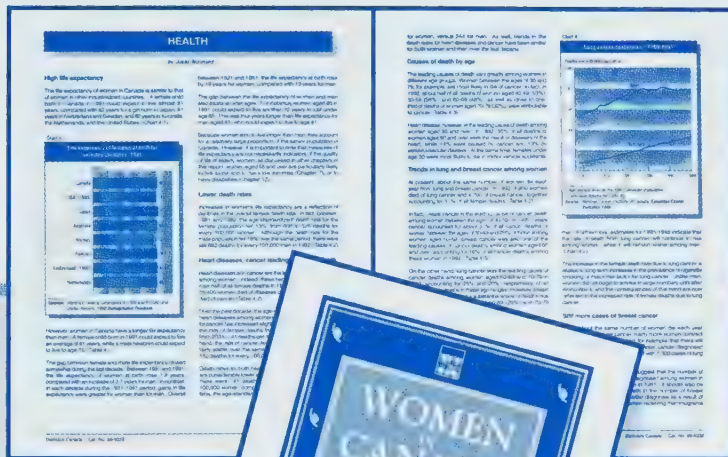
The low-income rate for seniors increased to 21% in 1996 from just under 19% in 1995. Since a large percentage of the elderly have incomes near the low-income cut-offs, their rate is particularly sensitive to small income shifts. The rise in their rate reflects the fact that more seniors fell just short of the cut-offs. An estimated 722,000 seniors had low-incomes in 1996. While this is 3% less than in 1980, the elderly population as a whole grew by 59% during this period. Consequently, the proportion of seniors with low incomes has fallen significantly, from one in three in 1980 to one in five in 1996.

**Income distributions by size in Canada, 1996**  
Statistics Canada, Catalogue no. 13-207-XPB



# Women in Canada

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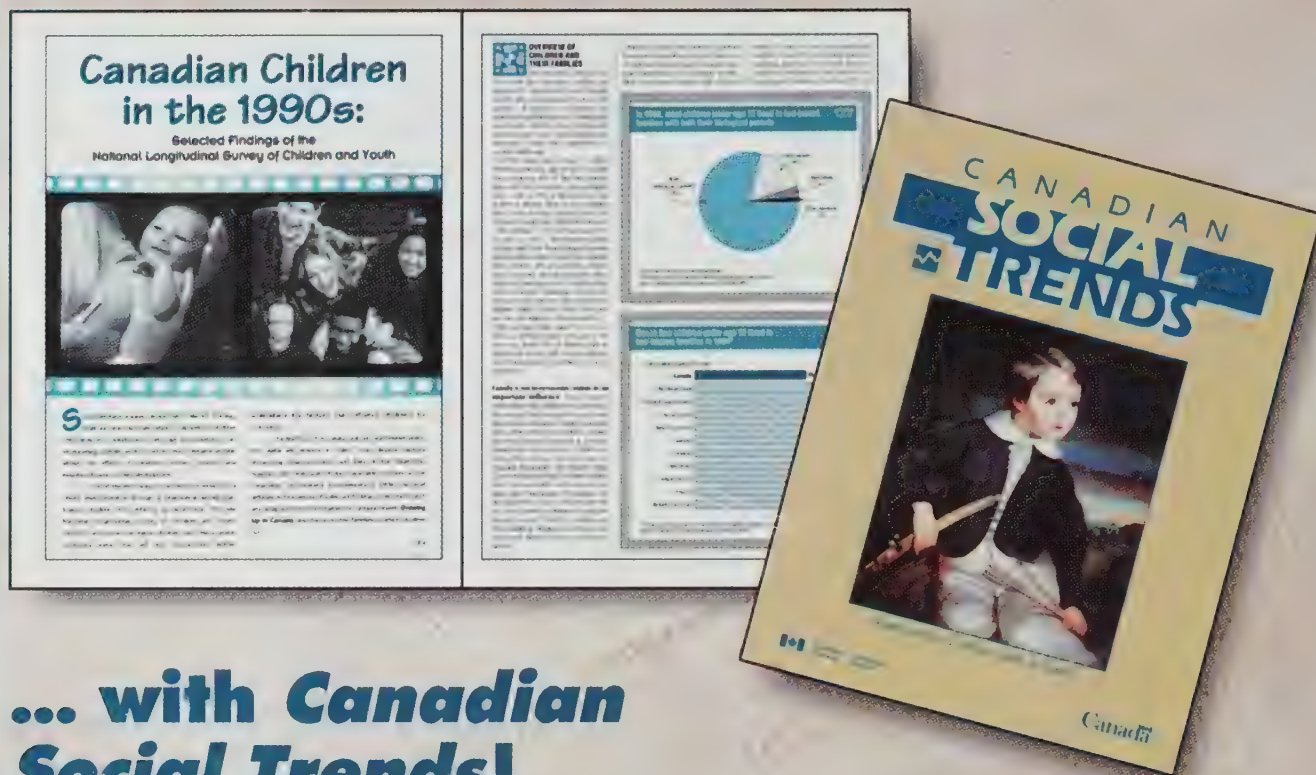
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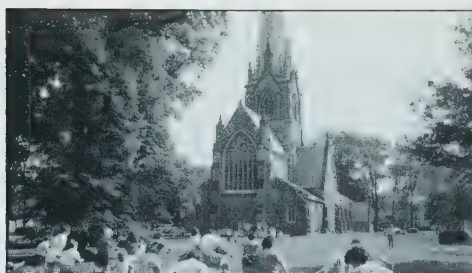
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### ON OUR COVER:

*Autumn Landscape* (1932-1946), oil on plywood, 36.2 x 30.5 cm. Collection: National Gallery of Canada, Ottawa.

### About the artist:

**Efa Prudence Heward** was born in Montreal, Quebec in 1896. She studied in Montreal and in Paris at the Académie Colarossi. In 1920, she returned to Montreal where she joined a group of artists who had secured rooms on Beaver Hall Hill. Heward specialized in figure and portrait painting and won first prize for her "Girl on the Hill" at the Willingdon Arts Competitions in 1929. She became a member of the Canadian Group of Painters (1933) and the Contemporary Arts Society (1939). Heward died in Los Angeles, California in 1947.

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**Acknowledgements**  
B. HAVENS, G. MORI, A. PLOURDE,  
E. PRAUGHT, W. WATKINS

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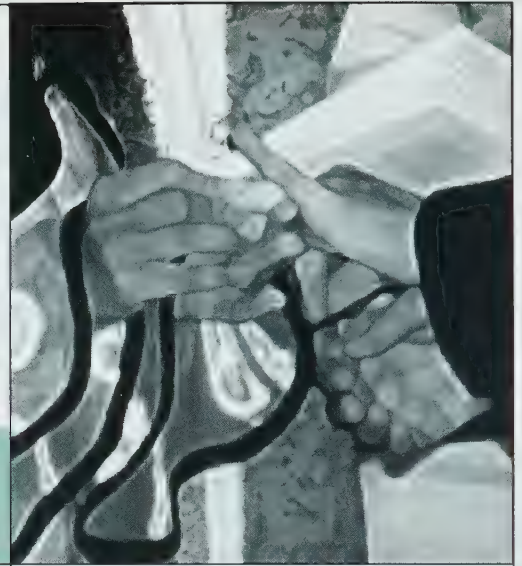
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# Religious Observance

## Marriage and Family



A person's behaviour may be greatly influenced by his or her religious convictions. Religious convictions may be displayed in different ways, such as attendance at religious services, prayer, meditation or reading of religious scriptures, all of which may be indicators of the importance of religion in a person's life. For many, regular attendance at religious services may be a reflection of a deep religious commitment and belief. Religious devotion, or the lack of it, has been associated with marital stability, family size, and premarital sex.

**by Warren Clark**



Religion can be viewed as a system of thought, feeling, and action shared by a group that gives members an object of devotion; a code of ethics governing personal and social conduct; and a frame of reference relating individuals to their group and the universe.<sup>1</sup> Most major religions teach compassion and helpfulness, and research has shown that religious attendance is associated with positive social behaviour.<sup>2</sup> Also, those who attend religious services more frequently are more likely to state that they have spiritual needs.<sup>3</sup> This may indicate that frequent attenders at religious services attach more importance to finding purpose and meaning in life than those who do not.

Using attendance at religious services as a proxy for religious conviction, this article examines the influence of religiosity on the attitudes of Canadians toward children, marriage and family relationships, and upon overall well-being, health and marital behaviour.

Religion plays an important role in the formation of attitudes to marriage and subsequent marital behaviour. For example, acceptance of biblical teachings about the sanctity of marriage and prohibitions against adultery may act as a barrier against divorce by reducing the likelihood of infidelity.<sup>4</sup> The 1995 General Social Survey (GSS) found that the most common reasons why someone might decide to pursue a divorce were abusive behaviour, unfaithfulness, lack of love and respect, and a partner who drinks too much.<sup>5</sup> While religious people were just as unwilling as those who never attended religious services to forgive a spouse's abusive or unfaithful behaviour, they were less likely to view lack of love and respect, and a partner's drinking too much as grounds for divorce. Religious couples were also more likely to state that they would stay married for the sake of their children.

**Weekly attenders place more importance on home life** The 1995 GSS asked Canadians to rate several areas of life in terms of their importance to the



## CANADIAN SOCIAL TRENDS BACKGROUNDER



### What you should know about this study

Statistics Canada's General Social Survey (GSS) collects data from a sample of approximately 10,000 Canadians aged 15 and over living in private households in the ten provinces. Since 1985, two religion questions have been asked on each survey: one concerning religious affiliation, and the other, attendance at religious services or meetings. Religiosity (religious commitment), as measured by attendance at religious services, may vary substantially from time to time. This article relates attendance at religious services at the time respondents were interviewed; religious commitment at the time of an event (e.g., marriage breakdown) may have been quite different than it was at the time the respondent was interviewed.

Throughout this article, the terms "religious people" and "weekly attenders" are used to indicate adults who attend religious services every week.

### Religious people more likely to want to keep the family together



Valid reasons for divorce	Attends religious services weekly	Never attends religious services
	%	
Abusive behaviour	92	96
Unfaithful behaviour	86*	88*
Lack of love and respect	76	92
Partner drinks too much	68	75
Would remain married for the sake of the children	57	36

\* Difference not statistically significant.

Source: Statistics Canada, 1995 General Social Survey.

<sup>1</sup> The Concise Columbia Encyclopedia 1995.

<sup>2</sup> Beutel 1995, pp. 438-439.

<sup>3</sup> Bibby 1995, p. 135.

<sup>4</sup> Call 1997, p. 383.

<sup>5</sup> Frederick 1998, pp. 7-8.



## Religious people tend to place greater importance on marriage, family and children

CST

	Average score	
	Attends religious services weekly	Never attends religious services
<b>Importance to happiness of...</b> (0=not at all important, 3=very important)		
• a lasting relationship	2.60*	2.45*
• being married	2.35	1.80
• having at least one child	2.27	1.95
• being able to have a paying job	1.89	2.10
<b>Agreement with following statement</b> (0=strongly disagree, 4=strongly agree)		
• Employed mothers can establish just as warm a relationship with their children as mothers who do not work for pay	2.26	2.54
• Keeping house is just as fulfilling as working for pay	2.60	2.28
• A job is alright but what women really want is a home and children	2.32	1.94
• A pre-school child is likely to suffer if both parents are employed	2.54	2.22
• Having a job is the best way for a woman to be an independent person	2.03	2.28
• If a man brings enough money home so his wife and children have a comfortable life, he has fulfilled his role as a husband and a parent	1.62	1.36
• A man should refuse a promotion at work if it means spending too little time with his family	2.24	2.01
• A woman should refuse a promotion at work if it means spending too little time with her family	2.30	2.05
• Both the man and woman should contribute to the household income	2.56*	2.73*
• Having a family is alright, but what most men really want is to be successful in their job	2.13*	2.09*
• A man does not have to be very involved in sharing the everyday tasks of raising children; this is not primarily a man's responsibility	0.91*	0.81*

\* Difference not statistically significant.

Note: Some of the differences between weekly attenders and those who never attended during 1995 is accounted for by age differences between the two groups. Young people have different values than older people; also young people are less likely to attend religious services on a weekly basis. Even after accounting for age differences between the two groups, all differences remained statistically significant except for those marked.

Source: Statistics Canada, 1995 General Social Survey.



respondent's happiness. On a scale from 0 to 3, 0 indicated the issue was not at all important, while 3 meant it was very important to their happiness.

Weekly attenders of religious services — both men and women — placed greater importance on lasting relationships, being married, and having at least one child than those who did not attend. Regardless of how often men attended religious services, they placed almost equal importance on being able to have a paying job. In contrast, women who attended weekly services believed a paying job was less important (1.59) than women who never attended (1.93). These views were common to all weekly attenders, regardless of their age.

Individuals were also asked to rate their agreement with certain statements relating to attitudes toward work and family. The scale ranged from 0 (strongly disagree) to 4 (strongly agree).

Weekly attenders of both sexes agreed more strongly with statements supporting family and the nurturing role of women than those who never attended. "Keeping house is just as fulfilling as working for pay" was the statement with which weekly attenders agreed most strongly.



Although they showed less agreement with the statement that "a job is alright but what women really want is a home and children", their opinion on this statement contrasted more starkly with non-attenders than on any other issue.

On other issues, weekly attenders' and non-attenders' attitudes were very similar. In fact, there was no real difference in their belief that men and women should contribute to the household income and the statement that men should share in the raising of children.

**Religious people feel better** Studies have found links between religion and mental health suggesting that people who regularly attend religious services have a more optimistic view of life than those who never attend. According to these studies, religious people are less likely than others to become delinquent, to abuse drugs and alcohol, to divorce or be unhappily married, and to commit suicide. Religiously active people may even tend to be physically healthier and to live longer, in part because of their healthier smoking, eating, and drinking habits.<sup>6</sup>

The 1996 GSS echoes some of these earlier findings. After taking account of income, family structure, education, age, sex and employment status (all of which may contribute to a person's sense of well-being), the odds of feeling very satisfied with their lives were 1.7 times higher for weekly attenders than those who had not attended religious services during the last 12 months.

People attending religious services every week also felt they had less stress in their lives. According to the 1996 GSS, weekly attenders had about half the odds (0.6) of having a very stressful life as non-attenders after accounting for other socio-demographic factors. Young weekly attenders under age 35 also were more likely to feel they had very good or excellent health than non-attenders. Young adults' feelings of better health may be related to less smoking. In 1996, only 18% of weekly young attenders were cigarette smokers compared with 38% of those age 15 to 34 who never attended. Older adults felt the same

about their health, regardless of how often they attended religious services.

### Weekly attenders have happier, longer marriages

Many things contribute to

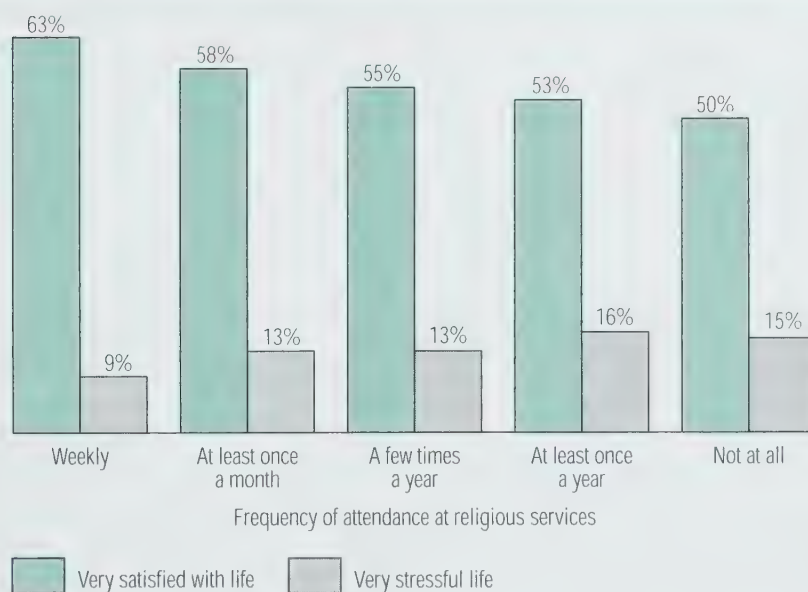
happy marital or common-law relationships. While religion may sometimes be a source of conflict in some relationships where partners differ strongly in their religious views, it seems that regular

#### Marriages of weekly attenders last longer

Decade when marriage began and attendance at religious services	Duration of first marriage		
	At least 5 years	At least 10 years	At least 15 years
	%		
Married in 1950s			
Weekly	99	98	96
Not at all	98	94	91
Married in 1960s			
Weekly	97	93	89
Not at all	92	83	73
Married in 1970s			
Weekly	95	89	84
Not at all	88	74	66
Married in 1980s			
Weekly	94	89	80
Not at all	85	69	57

Source: Statistics Canada, 1995 General Social Survey.

#### Weekly attenders experienced less stress



Source: Statistics Canada, 1996 General Social Survey.

<sup>6</sup> Myers 1995, p.16; Bradley 1995, pp. 259-267; Larson, 1994; National Institute for Healthcare Research, 1998.



attendance at religious services is related to stronger marriages. The odds of having a very happy marital relationship were 1.5 times greater for those attending religious services weekly than for those who didn't attend at all (after accounting for differences in age, education, income, religion, province, employment status and the decade when the marriage began). Interestingly, income appeared to have no influence on marital happiness, after the other factors were controlled for.

An earlier study based on the 1984 Canadian Fertility Survey found that

women who attended church weekly were less likely to want to dissolve their marriage.<sup>7</sup> The 1995 GSS supported these findings, showing that compared with those who never attended religious services, the odds that a weekly attender's marriage would break down were less than half.<sup>8</sup> Marriage longevity of weekly attenders was greater than that of non-attenders regardless of which decade they were married. For example, 89% of the marriages of weekly attenders who were married in the 1970s lasted at least 10 years, compared with 74% of non-attenders' marriages.

Those who attended religious services each week were also less likely to have lived common-law prior to marriage (6%) than non-attenders (21%).

**Summary** Canada appears to be becoming increasingly secular as organized religion plays a less important role in Canadians' lives. The number of Canadians reporting no religious affiliation is increasing and attendance at religious services is declining. The long-term effect of these trends on the fabric of society is difficult to foresee.

## CANADIAN SOCIAL TRENDS BACKGROUNDER



### "No religion" continues to grow

At the time of the 1961 Census, less than 1% of Canadians claimed to have no religion. By 1991, this proportion had increased to almost 13%.<sup>1</sup> Between 1981 and 1991, the number of Canadians reporting no religious affiliation increased from 1.8 million to 3.4 million. While the 1996 Census did not have a question on religion, the 1996 General Social Survey revealed that 14% of Canadians aged 15 and over had no religious affiliation.

Historically, Canada has been predominantly Christian, with most of the population divided between Protestants and Catholics. In the last 10 years (1986 to 1996), Roman Catholics remained at about 45% of the Canadian adult population, but the share of mainline Protestant denominations (United, Anglican, Presbyterian, Lutheran) has dropped from 28% of the adult population to 20%. At the same time, the conservative Protestant denominations<sup>2</sup> have remained at 6% of the adult population, while Eastern non-Christian Religions (Islam, Hinduism and Buddhism and other smaller groups) have grown to represent almost 3%, reflecting the increased cultural diversity of Canada.

**Attendance at religious services declines** Since the mid-1940s, people have been attending religious services less and less. In 1946, the Gallup Poll reported that 67% of Canadian adults had attended religious services during the previous week. By 1996, the GSS reported that only 20% of adult Canadians had attended religious services every week.<sup>3</sup>

The greatest decline in weekly attendance has been among Roman Catholics, falling from 37% in 1986 to 24% in 1996. Corresponding to the decline in weekly attendance has been an increase in the number of people who did not attend religious services during the year. While in 1986 only one in seven Roman Catholics did not attend church, by 1996 nearly one in three did not. Over the same time period, weekly attendance of mainline Protestants has declined from 17% to 14% of adults,

while conservative Protestants have maintained weekly attendance figures in the 50% to 60% range.

Religious service attendance has declined across all age groups, indicating a broad disenchantment with institutionalized religion. Not surprisingly, seniors showed the most enthusiasm for religious services. In 1996, 34% of those aged 65 and over attended weekly, compared with only 12% of 15- to 24-year-olds.

In 1996, many adults (32%) who said they were affiliated with a religion did not attend religious services at all. Another significant minority (10%) said they only attended once or twice a year. This suggests either that people are less committed to their religion or that religion has become more a personal commitment than communal worship. In the United States, attendance made a comeback in the early 1970s and 1980s as the baby boomers began to form families. Weekly attendance rates remained almost constant at 30% from 1986 to 1993.

Although attendance at religious services has declined substantially in Canada over the last 20 years, in 1995, Reginald Bibby's Project Canada survey indicated that the vast majority (81%) of Canadians still believed in God. This compares with 89% in 1975, implying that although attendance has declined sharply, most people have retained their belief in God.<sup>4</sup>

<sup>1</sup> The 1961 Census asked "What is your religion?" but had no check-off category to indicate "no religion". Respondents wishing to indicate this had to write in "no religion" in the space provided. Since 1971, each decennial Census has had a mark-in response category for "no religion".

<sup>2</sup> Includes Baptist, Pentecostal, Nazarene, Evangelical Free, Mennonite, Salvation Army, Reformed, Christian and Missionary Alliance and other smaller groups. Mainline Protestant and Conservative Protestant are defined based on definitions used by Nock 1993, p.47,48,54 and Bibby 1987, p.28.

<sup>3</sup> The Gallup poll asked whether respondents had attended church services in the last 7 days; the GSS asks how frequently respondents have attended religious services in the last year. Since some people who attend infrequently may have actually attended last week, the Gallup Poll results may be somewhat inflated compared with the stricter GSS definition of religious observance.

<sup>4</sup> Bibby 1995, pp.130-131.



Attendance at religious services can influence attitudes, which in turn have an impact on behaviour. Weekly attenders tend to be more forgiving of marital problems and less likely to cite these problems as a valid reason for ending a relationship. Religious people also hold more traditional family values, placing greater importance on children and the family and on the nurturing role of women within the family. In addition, religious people tend to report having happier, less stressful lives and happier relationships with their partners.

<sup>7</sup> Balakrishnan, 1987, p. 396.

<sup>8</sup> After accounting for the effect of a variety of socio-demographic factors including decade when the marriage began, education, religion, pre-marital births, teenage pregnancy, province, age difference between spouses and whether a common-law union preceded marriage.

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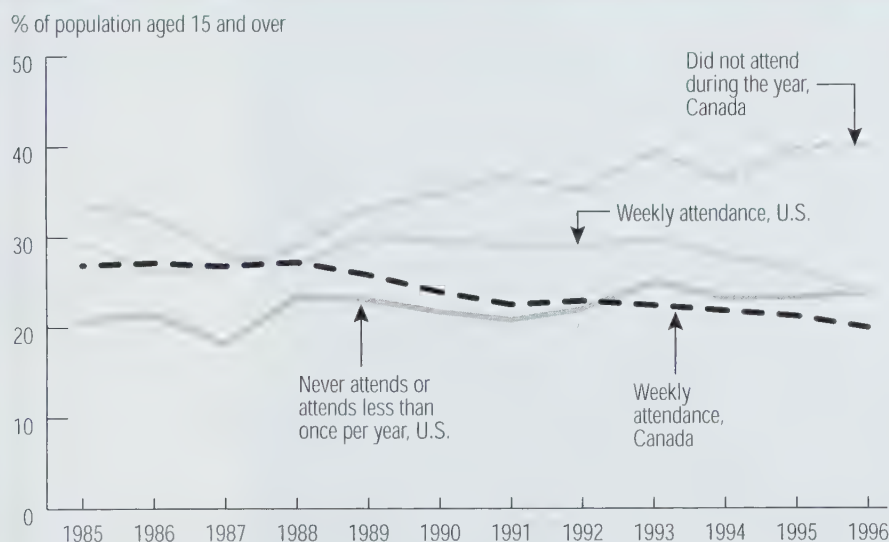


### Eastern non-Christian religions and those reporting no religion have grown fastest

Religion	1986	1991	1996
	millions		
Roman Catholic	9.0	9.3	10.4
Mainline Protestant	5.6	5.0	4.8
Conservative Protestant	1.2	1.1	1.4
Other Protestant	0.7	0.7	1.2
Jewish	0.2	0.2	0.2
Eastern Orthodox	0.3	0.2	0.2
Eastern non-Christian religions	0.3	0.5	0.7
No religion	2.0	3.5	3.4
Not reported, don't know	0.4	0.5	1.2

Source: Statistics Canada, General Social Survey.

### Attendance at religious services continues to decline



Sources: Statistics Canada, General Social Survey; National Opinion Research Center, U.S. General Social Survey.

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# WHEN PARENTS REPLACE TEACHERS: THE HOME SCHOOLING OPTION

by Jacqueline Luffman

At the start of every school year, a number of children do not head off to the classroom. Instead, they stay with a parent who will be teaching them at home what others learn at school. Despite the fact that registered home schoolers still only account for a small percentage of school age children, their number has increased every year since the early 1980s. These increases may be the result of more parents home schooling, or of better coverage of home schoolers by education ministries. Home schooling is especially active and growing in the Western provinces, particularly in Alberta and British Columbia. Increased public acceptance and the introduction of more flexible legislation may have contributed to this growth.



In most cases, parents home school for religious, moral or pedagogical reasons.<sup>1</sup> This arrangement is ideal for those who wish to incorporate their beliefs and values into the curriculum, who are concerned that not enough learning takes place in the classroom, and who prefer their child to learn in a non-formal, family setting. According to supporters of home schooling, the benefits for children are many: they may, for example, learn at their own pace, pursue special interests, make the most of individual strengths and weaknesses, and avoid the competition and peer pressure of the classroom. Home schooling may also be the solution for a child who, for whatever reason, does not fit in a regular classroom and is falling behind academically, socially or both.

Critics, however, are quick to point out areas of concern: the average parent's ability to cover all areas of the curriculum, the availability of appropriate program materials and the potential absence of social interaction. And although every province monitors home schoolers for compliance with the Education Act, no province has regulations regarding the qualification of parents to teach.

**Different regulations in different provinces** All provinces exempt children from attending public schools provided parents can prove that the child receives satisfactory instruction at home or elsewhere. Typically, parents must register their children for home schooling with a local school board or school in their area. In Alberta and the Northwest Territories — the only two jurisdictions where some funding is guaranteed to parents who home school — home educational plans must be approved. In all other provinces, guidelines are issued for the preparation of these plans but approval is not required.<sup>2</sup>

Because registration requirements and tracking of home schoolers vary across Canada, reliable estimates on the number of home-educated students are difficult to come by. In addition, for a variety of reasons (most of which have to do with fear of interference), not all parents who home school their children register with the province.<sup>3</sup>

### Home schoolers represent a growing share of school age children

Registered home schoolers as % of total enrolment



Sources: Provincial Ministries of Education; Statistics Canada, Survey of School Enrolment and Graduates.

## CANADIAN SOCIAL TRENDS BACKGROUNDER



### What you should know about this study

One of the most challenging aspects of home schooling research relates to the difficulty of identifying home schoolers. There are no statistical portraits or analyses, Statistics Canada does not collect information on this topic, and little is known about the characteristics of home schooling families. Because reliable data on the number of home schoolers are not available, estimates from various sources must be used when analyzing this population. The numbers relating to home schoolers presented in this article were derived mainly from ministry officials in each province, with the exception of Quebec, where these figures are not collected.

### Definitions

**Home schooling, home educating or home-based education:** occurs when a child participates in his or her education at home rather than attending a public, private or other type of school. Parents or guardians assume the responsibility of educating their child and may develop their own curriculum guidelines.

Instruction which takes place at home because of health, disability or location, and which remains under the direction of public education authorities, is considered school-based instruction and not home schooling.

**Home schooler or home-based learner:** a student who receives instruction through a home-based education program without attending a formal school.

**Registered home schooler:** a home schooler whose parent or guardian has notified a school, school board or provincial ministry of their intention to home educate their child.

**Home-based educational plan:** provincial curriculum guidelines that parents must follow when educating their children at home. In some provinces, parents are required to submit an educational plan proving that their curriculum complies with the learning objectives of provincial legislation.

<sup>1</sup> D.S. Smith. 1993. *Parent-generated home study in Canada: the national outlook*, 1993. Westfield, N.B.: Franccombe Place.

<sup>2</sup> For full details of provincial requirements, see "A profile of home schooling in Canada", *Education Quarterly Review*, Winter 1997, Catalogue 81-003-XPB, Statistics Canada.

<sup>3</sup> Brian, Ray. 1994. *A nationwide study of home education in Canada: Family characteristics, student achievement and other topics*. Salem, Oregon: National Home Education Research Institute. Of the 762 families in this study, 8% did not comply with legal requirements for notification of home schooling.



This suggests that a number of home schooling families remain invisible and, as a result, official counts of registered home schoolers typically underestimate the actual numbers. For example, according to provincial ministries of education, in 1996-97, registered home schoolers totaled approximately 17,500 or about 0.4% of total enrolment.<sup>4</sup> In contrast, home schooling organizations have placed the number of students studying at home at 30,000 to 40,000, or approximately 1% of total student enrolment.<sup>5</sup>

**Majority of home schoolers at elementary level** Alberta, Saskatchewan, Ontario and Nova Scotia are the only provinces where data on the grade level of home schoolers are available. These data show that an average of over 60% of children studying at home were elementary students in 1995-96; however, this proportion varied quite substantially, ranging from 52% in Saskatchewan to 91% in Ontario.

Although data on educational level are not collected by the other provinces and territories, it seems reasonable to assume that in the rest of the country, most children educated at home are elementary school students as well. Generally, home schooling at the high school level is more difficult, as parents need to have a wide range of advanced subject matter knowledge to cover the curriculum. In addition, teenagers usually want to participate in social or extra-curricular activities, which are not as easy to provide in a home environment. Nonetheless, the number of registered secondary-level home schoolers has grown between 1993-94 and 1995-96. Perhaps fuelling this growth are school board policies that allow home schoolers use of library and other resources; provinces where these special arrangements are available tend to have higher proportions of high school-level students studying at home.

**Conclusion** With the help of regionally based support groups and national organizations, the home schooling movement has been gaining momentum over the last 12 years. But, home schooling is not for everyone. Relatively few parents are able to invest vast amounts of time, effort and energy into teaching their children at home. Fewer still have the required knowledge — particularly at the secondary level — and instructional capability necessary to carry out the job well. Those who do, however, feel that they are raising healthy, well-adjusted children in a positive, family-oriented environment.

Over the past decade, home schooling has shed its image as a social or educational aberration. As a result, or perhaps because of it, the proportion of students who, during these years, received their education at home has grown steadily. Because home schooling remains for some a viable alternative to traditional school-based learning, it is, and will continue to be, an important issue in education.

<sup>4</sup> Excludes home schoolers in Quebec, where the Ministry of Education does not collect figures on registered home schoolers.

<sup>5</sup> Priesnitz, Wendy and Heidi Priesnitz. (1990) *Home based education in Canada — An investigation*. Canadian Home Schoolers. St. George, Ontario: Alternative Press.

• This article is based on "A profile of home schooling in Canada," *Education Quarterly Review*, Winter 1997, Catalogue 81-003-XPB, Statistics Canada.

**Jacqueline Luffman** is an analyst at Statistics Canada.

### The popularity of home schooling varies widely by province

CST

	1995-96		
	Total <sup>1</sup> enrolment	Registered home schoolers	Home schoolers as % of total enrolment
	'000		
Newfoundland	111	54	0.1
Prince Edward Island	25	80	0.3
Nova Scotia	168	290	0.2
New Brunswick	138	241	0.2
Quebec	115	--	--
Ontario	219	2,916	0.1
Manitoba	223	926	0.4
Saskatchewan	213	1,113	0.5
Alberta	548	7,058	1.3
British Columbia	654	4,801	0.7
Yukon	6	44	0.7
North West Territories	18	--	--
<b>Canada</b>	<b>5,440</b>	<b>17,523</b>	<b>0.4</b>

-- Figures not available.

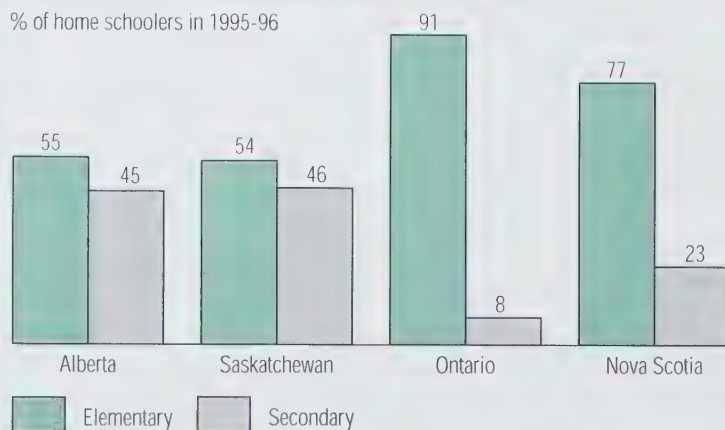
<sup>1</sup> Includes public, private, federal, as well as visually and hearing impaired students.

Sources: Statistics Canada, Catalogue no. 81-229-XPB; Provincial Ministries of Education.

### Proportion of secondary-level home schoolers highest in Saskatchewan

CST

% of home schoolers in 1995-96



Source: Provincial Ministries of Education.



## ERRATA

Catalogue no. 11-008-XPE  
*Canadian Social Trends*, Autumn 1998

See Table entitled:

"The popularity of home schooling varies widely by province", page 10.

The total enrolment (in thousands) for Quebec is 1,149 (not 115)  
and 2,187 for Ontario (not 219).

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### The popularity of home schooling varies widely by province

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Newfoundland	111	54	0.1
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-- Figures not available.

<sup>1</sup> Includes public, private, federal, as well as visually and hearing impaired students.

Sources: Statistics Canada, Catalogue no. 81-229-XPB; Provincial Ministries of Education.

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by Kelly Cranswick

# Who Needs Short-Term Help?



Caregiving often brings to mind visions of frail seniors being cared for by their families. However, people who are experiencing a temporarily difficult period in their lives — they may have lost a loved one, broken a leg or just given birth — also need help to look after the children, cook dinner or shop for groceries.

People who need assistance just for a short time often find themselves having to rely on the help of family and friends. But many people live far from their support networks, particularly parents and siblings, who are especially important sources of help. Divorce or separation, and step or blended families, can also complicate the situation since a person may feel unsure about who they can turn to when they need help.

According to the 1996 General Social Survey, 900,000 Canadians accepted help while they were going through a temporarily difficult time. Despite its importance, however, little recognition is given to short-term caregiving. Perhaps this is because it is largely unstructured and makes few, if any, demands on public sector resources. Whatever the reason, most caregiving studies focus on long-term care, especially to seniors.

This article addresses the gap in the research by providing a first glimpse of Canadians who receive help because of a temporarily difficult time. It also identifies the people whose needs are likely to be neglected during a period of short-term difficulty.



### Who receives help due to a temporarily difficult time?

Women were more likely than men to receive help during a difficult time. Five percent of women 15 years and over (about 600,000) compared with 3% of men (about 290,000) received help at some point during 1996 because of a short-term problem. Women most likely to require assistance were those aged 25 to 44 (6%), who are of prime child-bearing age, and women 65 years and over (6%<sup>1</sup>), whose health tends to be failing. Among men, seniors were most likely to receive help to get through a tough time (4%<sup>1</sup>).

Living alone or with one's family made little difference as to whether a person received help. Five percent of people living

alone were assisted during a temporarily difficult time. This compared with 4% of people living with their spouse and 4% living with their spouse and children. Three percent of people living in "other" situations, including single parents and people 15 years and over living with their parents, also accepted short-term help.

While living arrangements did not reveal much about who received help during a temporary difficulty, the presence of young children living in the household was somewhat more telling. People with children under 5 years of age were most likely to be recipients (6%); those with older children were less likely (4%). The somewhat higher demand of people with preschool children reflects the fact that people often need assistance after the birth of a child, and helps to explain why women were more likely to require short-term caregiving.

**What tasks do people need help with?** To learn about the assistance Canadians received during a short-term crisis, the 1996 General Social Survey (GSS) asked people to identify the help they obtained for four specific sets of activities: personal care, tasks around the house, running errands, and childcare.

**Personal care** The greatest number of care-receivers — almost 400,000 — got help with their personal care,<sup>2</sup> with fewer men receiving assistance than women. People are not likely to seek assistance with their personal care unless absolutely necessary, therefore, it was not surprising that short-term illness<sup>3</sup> or serious injury was cited by 8 out of every 10 people as the reason they needed help with these intimate tasks.

As might be expected, a large proportion of caregivers providing personal care during a short-term crisis were spouses. Daughters, sisters and mothers also offered assistance. And, although some people received care from their friends, the numbers were somewhat small, probably because it is often

## CANADIAN SOCIAL TRENDS BACKGROUND

CST

### What you should know about this study

This article uses data from the 1996 General Social Survey (GSS) on social and community support. The survey interviewed almost 13,000 Canadians aged 15 and over living in private dwellings in the ten provinces. Data were collected on care received in the previous 12 months due to a long-term health problem or physical limitation or due to a temporarily difficult time. Care could have been provided informally by family and friends or formally by paid employees, government and non-government organizations.

**Temporarily difficult time:** A short-term condition lasting or expected to last less than six months, for example, birth of a child, short-term health problems, moving or changing jobs, financial problems, accident or the death of someone close.

**Sets of tasks:** Care-receivers were asked if any organization or anyone other than themselves had provided help with personal care; tasks around the house (meal preparation and clean-up, house cleaning, laundry and sewing, and house maintenance and outside work); running errands (shopping for groceries or other necessities, providing transportation, and banking and bill paying); and childcare.

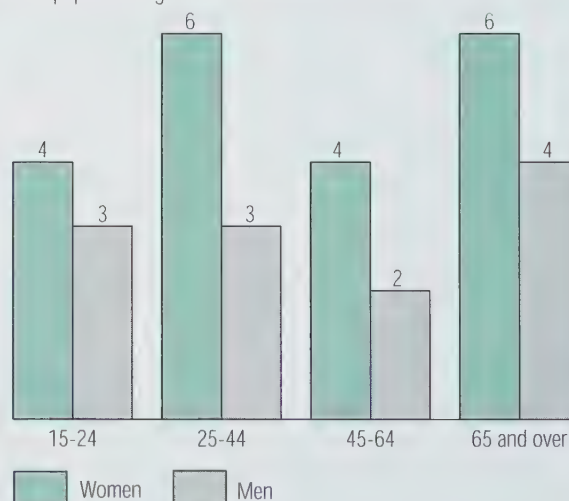
**Unmet needs:** Care-receivers were asked if they required any additional assistance with each of the four sets of tasks. Those with unmet needs included people who were already receiving assistance but who needed additional assistance, as well as people who needed, but did not get, help with these tasks.

Some of the estimates in this study are based on small sample sizes and have high sampling variability; they should be used with caution.

### Women most likely to receive help due to a temporarily difficult time<sup>1</sup>

CST

% of population aged 15 and over



<sup>1</sup> Some of these estimates are subject to high sampling variability.  
Source: Statistics Canada, 1996 General Social Survey.



uncomfortable to accept assistance for tasks such as bathing from someone who is not a close family member.<sup>4</sup> However, people must feel differently about formal caregivers as the largest proportion of care-receivers chose to entrust their personal care to professionals.

**Tasks around the house** Over 385,000 Canadians received help with the tasks around their house because they were in the midst of a temporarily difficult time. Most got help with house cleaning, laundry and sewing. Many other care-receivers needed someone to lend a hand with preparing meals and cleaning up afterwards, while some got help with house maintenance and outside work. For each type of task, more women than men received assistance.

In the majority of cases (58%), help with household chores was provided because the care-receiver had a short-term illness. The birth of a child (pregnancy or adoption) and/or problems with children (19%) were also relatively common reasons. Spouses and mothers most often provided support with household chores.

**Running errands** Often times, people have responsibilities that take them out of the house. In 1996, more than 219,000 Canadians with a temporary problem received assistance running their errands. A slightly larger number got help with transportation than with shopping, while a smaller proportion received help with their banking and bill-paying. Gender differences were pronounced, with more women than men receiving assistance with each task. Short-term illness (66%) was again the main reason why people were unable to leave their homes to run errands.

The caregivers who ran errands were different than those who provided help with the other tasks. Daughters and sisters were called on most frequently to take on these responsibilities. While many people still turned to spouses during a difficult time, even more turned to other family members, and some went to friends. Possibly it is easier to ask for help from someone who is already running an errand, especially if they are not a member of the household; for example, asking friends to do one's shopping when they do their own.

**Childcare** In 1996 more than 137,000 Canadians with children under age 15 received help with childcare when they were going through a difficult spell. One-third<sup>1</sup> received childcare because of the birth of a child (pregnancy or adoption) and/or problems

with their children; one-fifth<sup>1</sup> cited "other" reasons, such as school responsibilities. Not unexpectedly, Canadians receiving help with childcare were most likely to turn to their mothers.

### Most help for temporarily difficult times was given by immediate family<sup>1</sup>

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#### % of people receiving help from a specific caregiver

Relationship	Personal care	Tasks at home	Running errands	Childcare
Spouse	34	28	25	--
Mother (in-law)	16	29	17	37
Daughter (in-law) & sister (in-law)	18	21	34	--
Other relatives	--	25	30	--
Formal caregiver	36	21	--	31
Friends <sup>2</sup>	9	18	21	--

-- Data too small to be released.

<sup>1</sup> Many of these estimates are subject to high sampling variability.

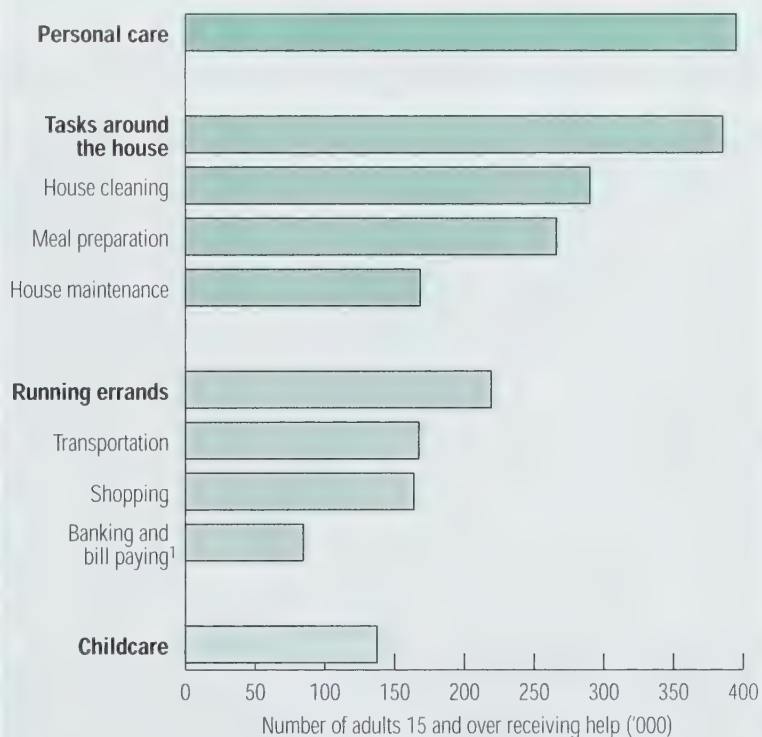
<sup>2</sup> Included friends, neighbours, co-workers and ex-partners.

Note: Columns do not add to 100 as a person could have been receiving help from more than one person.

Source: Statistics Canada, 1996 General Social Survey.

### More care-receivers were getting help with their personal care

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<sup>1</sup> High sampling variability.

Source: Statistics Canada, 1996 General Social Survey.

<sup>1</sup> This estimate has high sampling variability.

<sup>2</sup> Help with personal care includes assistance with bathing, brushing teeth or dressing, etc.

<sup>3</sup> Short-term illness also includes minor injuries.

<sup>4</sup> Leroy O. Stone, 1993. "Social consequences of population ageing: The human support systems dimension." Proceedings of International Population Conference. Montreal: International Union for the Scientific Study of Population. Vol. 3, pp. 25-34.



## Age, employment status biggest predictors of having unmet needs



		Odds ratio of needing additional assistance	
<b>Social network</b>			
Parent(s) still living	Yes	1.0	
	No	1.9	
Sibling(s) still living	Yes	1.0	
	No	0.6*	
Child(ren) still living	Yes	1.0	
	No	0.3	
Feel close to friends and relatives	Yes	1.0	
	No	1.4*	
Attend religious services weekly or monthly	Yes	1.0	
	No	1.4*	
<b>Main activity</b>			
Employment Status	Working	1.0	
	Not working	2.7	
<b>Personal characteristics</b>			
Age	65 and over	1.0	
	45-64	2.0*	
	25-44	6.0	
	15-24	3.7	
Sex	Men	1.0	
	Women	1.2*	
Marital status	Married	1.0	
	Separated/divorced	2.0	
	Widowed	2.1*	
	Single	0.8*	

\* Difference not statistically significant.

Source: Statistics Canada, 1996 General Social Survey.

The significant number of people getting formal help also suggests that many parents hire childcare workers to help out on a short-term basis.

**The need for additional assistance** While 900,000 people who went through a temporarily difficult time in 1996 received assistance, there were more than 200,000 people who did not get enough, if any, help. This total included approximately 120,000<sup>1</sup> people who had received help but needed more, and over 90,000<sup>1</sup> people who had wanted assistance but did not receive any. What were the odds that someone would not get sufficient help during a temporarily difficult time?

Since parents, especially mothers, often provide help during a temporarily difficult time, it seems reasonable to assume that a person without family would be more likely to lack the help they need. Data from the 1996 GSS support this belief. After controlling for other factors, the odds of having unmet needs were twice as great for people with deceased parents than for people who had at least one living parent.

On the other hand, people without children were less likely to have unmet needs, compared to people with children. This could be because children make demands that can be inconsistent with a parent's own needs, especially during a tough time, a conflict that childless people do not have to cope with.

### People not working more likely to need added help

The odds of needing additional assistance were almost three times greater for people not employed in the work force as for those who were employed. People who were "not employed" included individuals with long-term illnesses, retirees or seniors, women on maternity leave, and people looking for work, which can be a stressful time. In other words, people undergoing a temporarily difficult time may be over-represented among those outside the workforce. However, it should be noted that employed people often develop social networks at work, and may call on their colleagues to provide assistance.

The likelihood of having unmet needs generally declined with age. When all other factors were accounted for, the probability of needing additional short-term assistance was about 6 times greater for people aged 25 to 44 than for those 65 and over. This may seem surprising, but is probably explained by the fact that many seniors receiving assistance are getting long-term help, so are less likely to have unmet needs because of a temporary problem.

Divorced or separated people were twice as likely as married people to report they had unmet needs during a difficult time. One obvious reason is that married people are often able to rely on their spouse for support. Another possibility is that the temporarily difficult time may itself be the process of





separation or divorce. This is suggested by the finding that the odds of other unmarried people — widows or widowers and single people — having unmet needs were not significantly different than the odds of married couples. These unmarried people may have found sources of support outside marriage, something divorced people had not yet developed.

**Some unexpected findings** Several other characteristics, especially social network factors, that might be expected to be associated with unmet needs were not. When other factors were controlled for, women faced no higher odds than men in finding help during a difficult spell. This result is interesting, since more women than men reported having received help for a short-term difficulty in 1996, and accounted for two-thirds of people with unmet needs. Also, even though sisters were often cited as caregivers, the odds of people without siblings having unmet needs were no different than the odds of people with brothers and sisters.

Similarly, having close friends and relatives was not a significant factor in having unmet needs, probably because people most often rely on immediate family members, such as spouses and parents, for assistance. And, while one would suspect that a strong social network is developed through participation in religious activities, it would seem that fellow members are not called upon for help in a crisis. The odds of having unmet needs during a temporarily difficult time were not different for people who did not attend religious services regularly, than for those who did.

So, who typically needs additional assistance during a temporarily difficult time? People with unmet needs were likely to be divorced, 25 to 44 years of age with children, suggesting that these people may be single parents. Generally they were not

employed in the paid labour force and their parents were deceased.

**Summary** According to the General Social Survey, 900,000 Canadians who went through a temporarily difficult time in 1996 received assistance. While the findings suggest that most people who required short-term help were getting it, there still remained more than 200,000 people who needed temporary assistance, and who were not getting enough, if any, help.

Receiving help because of a temporarily difficult time can be viewed as part of a dynamic exchange: for every person who no longer needs help, there is another who is going through a short-term crisis and requires assistance. And the demand for such help is likely to increase. The growing practice among hospitals of discharging patients early, and the expansion of out-patient treatment, may increase the number of people needing help as they recover at home. Meanwhile, with the number of divorces each year remaining steady at approximately 78,000, people undergoing the trauma of marital breakdown are likely to need short-term help with childcare and other tasks.

**Kelly Cranswick** is an analyst with Housing, Family and Social Statistics Division, Statistics Canada.

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# TRENDS in contraceptive sterilization

Compared with other industrialized nations, voluntary sterilization for contraceptive purposes is remarkably widespread in Canada. By 1995, some 3.3 million couples had undergone a vasectomy or tubal ligation in order to end their ability to have children.

The prevalence of this practice, the early age at which it is often performed, and its generally irreversible nature have had a significant effect on women's fertility rates and the size of families. This article outlines the changing patterns of male and female sterilization between 1984 and 1995, and examines some of the characteristics of couples who choose this option.

by Alain Bélanger

### Almost half of couples of childbearing age are sterile

In 1995, approximately 4.6 million Canadian couples, nearly half of all couples in which the woman was aged 15 to 49, were sterile. This total includes couples in which one or both partners were sterile from natural causes, as well as those who were sterilized for medical or contraceptive reasons. Data from the 1995 General Social Survey (GSS) show that natural and medical sterility is more widespread among women than men. In 1995, some 250,000 women were sterile from natural causes compared with 106,000 men. The difference was even more pronounced for those who underwent sterilization for medical reasons: 857,000 women compared with 58,000 men.

On the other hand, sterilization for contraceptive purposes has recently become more common for men. By 1995, approximately 1.8 million men had undergone contraceptive sterilization compared with 1.5 million women. These figures reveal significant changes in attitudes and behaviour over the last few decades. The most striking feature of the trend in contraception during the 1984 to 1995 period was, without doubt, the steady increase in the proportion of vasectomies and a corresponding decrease in tubal ligations.

### Sterilization appeals to older couples

Because sterilization procedures are virtually irreversible, very young couples, who are less likely to have completed their family, tend not to undergo them. Generally, couples where the woman is between 25 and 29 are the youngest to opt for this procedure. As of 1995, about 10% of couples in this age range had chosen this method. Once people reach their thirties, the percentage of those who opt for sterilization increases rapidly: from 26% of couples in which the woman was between 30 and 34, to nearly 45% by ages 35 to 39. By the end of a woman's reproductive cycle, between ages 45 to 49, nearly half (49%) of couples had chosen this option.

Whether the man or the woman undergoes contraceptive sterilization depends, to a large extent, on which generation the partners belong to. Among couples who underwent this procedure, 45% of men whose partner was between 45 and 49 had a vasectomy, whereas this proportion rose to 66% among couples in

which the woman was aged 25 to 29. It appears that the younger generation of men are more inclined to assume their share of responsibility for contraceptive sterilization.

**Two children the norm** It is after the birth of the second child that the use of sterilization as a contraceptive method becomes a major phenomenon. The proportion of couples in which one of the

## CANADIAN SOCIAL TRENDS BACKGROUNDER



### What you should know about this study

Data in this article come from the 1995 General Social Survey (GSS), which is the first national survey since the 1984 Canadian Fertility Survey to ask questions on birth control practices. Men and women between the ages of 15 and 50, regardless of marital status, were asked to respond to the contraceptive methods part of the survey. Of the 5,300 respondents who met these criteria, almost 2,250 confirmed that they were currently using some method of contraception. Pregnant women, men whose partner was pregnant at the time of the interview, and couples in which one of the partners was sterile as a result of natural or medical conditions, were excluded from the interview.

Contraceptive sterilization includes tubal ligation and vasectomy. The GSS distinguishes between persons who have had an operation for contraceptive purposes, those who have been sterilized for medical reasons, and those who are sterile without surgery. This article focuses on those who have had the operation for contraceptive reasons.

### The use of contraceptive sterilization has almost doubled over the past 20 years



Contraceptive method	% of married women aged 18 to 49 using method		
	1976 <sup>1</sup>	1984	1995 <sup>2</sup>
<b>Natural methods</b>	<b>9.5</b>	<b>4.3</b>	<b>1.9</b>
Periodic abstinence	6.1	3.0	0.8
Withdrawal	3.4	1.3	1.0
<b>Barrier methods</b>	<b>14.8</b>	<b>13.5</b>	<b>16.8</b>
Condom	6.0	10.8	15.7
Diaphragm	2.2	1.4	0.6
Douche, jelly	2.5	0.7	0.2
Others	4.1	0.6	0.3
<b>Pill and intra-uterine devices</b>	<b>45.2</b>	<b>23.0</b>	<b>25.2</b>
Pill	39.2	15.0	20.8
IUD	6.0	8.0	4.4
<b>Sterilization</b>	<b>30.5</b>	<b>59.3</b>	<b>56.1</b>
Tubal ligation	--	41.7	30.0
Vasectomy	--	17.6	26.1

-- Figures not available.

<sup>1</sup> Aged 15 and over.

<sup>2</sup> Includes women in common-law relationships.

Sources: C. Guilbert-Lantoin (1990). "The contraceptive revolution in Canada." *Population*, vol. 45 (2), pp. 361-398; Statistics Canada, 1995 General Social Survey.



partners has undergone a vasectomy or tubal ligation rises from 14% for couples with only one child to 47% for those with two; it levels off at 51% for couples with three or more children.

The widespread use of sterilization is one of the contraceptive tools which has allowed for the emergence of a smaller and relatively uniform family size across Canada. In sharp contrast with earlier generations, the two-child family is increasingly becoming the norm. The proportion of ever-married women aged 45 to 49 with only two children grew from 23% in 1981 to 40% in 1991, while the percentage with five or more decreased from 22% to 6%.<sup>1</sup>

### Married couples more likely to choose sterilization

Except in the youngest age groups, married and common-law couples practice contraception in similar proportions, implying comparable fertility patterns and family sizes. The methods they use, however, differ. In particular, common-law couples where the woman is 25 or over tend to favour birth control pills, whereas married couples in the same age group choose sterilization as a means of contraception. Among the youngest (20- to 24-year-olds), common-law couples practiced contraception more often than married couples, at 86% versus 70%.

### Vasectomy less common among foreign-born men

Ontario, Quebec and British Columbia, the three most populous and urbanized provinces, have the highest proportions of couples who do not use any type of contraception. These are also the provinces which have received the largest numbers of recent immigrants. Results of the 1995 GSS suggest that the contraceptive practices of immigrants are considerably different than the practices of those born in Canada. While 20% of Canadian-born couples used no contraceptives, the corresponding percentage was 31% for those born in Europe or the United States and 35% for those from other countries.

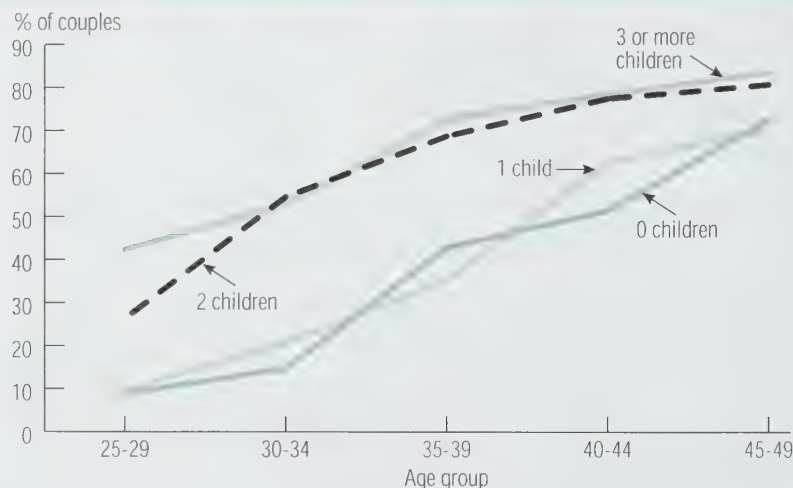
Sterilization practices, particularly for men, vary significantly as well between Canadian and foreign-born couples. The proportion of couples in which the man underwent a vasectomy was much lower among non-Western foreign-born persons than among those born in Canada: 7% versus 25%. It appears that cultural norms (as approximated by place of birth) are most likely responsible for these differences. According to the GSS, men from non-Western cultures are nearly four times less likely to undergo vasectomies than those born in Canada. Since the proportion of immigrants is highest in Ontario, it is not surprising to find that male sterilization rates were lowest in this province.

### By 1995, one-third of Canadian couples had opted for sterilization as a contraceptive method

Age Group	Total number of couples '000	% of couples where one partner had contraceptive sterilization	% of couples where man had vasectomy
		%	%
25-29	1,432	9.6	6.3
30-34	2,193	26.2	16.5
35-39	1,960	44.9	25.2
40-44	1,739	45.8	23.6
45-49	1,735	49.0	22.2
<b>Total</b>	<b>9,825</b>	<b>33.2</b>	<b>17.9</b>

Source: Statistics Canada, 1995 General Social Survey.

### Contraceptive sterilization is most common among couples with two or more children



Source: Statistics Canada, 1995 General Social Survey.

### Method of sterilization varies with education

Although the proportion of people using contraception does not vary markedly with educational attainment, the choice of method does. By 1995, for example, couples in which the respondent had a high school diploma only were nearly twice as likely to opt for female sterilization as those who had earned a college or university degree: 29% versus 15%. Interestingly, the difference was much less pronounced in the case of male sterilization. The proportion of couples who decided on vasectomies ranged between 23% and 24% regardless of whether the highest level of educational attainment was a high school diploma or a university degree.

<sup>1</sup> Data are provided for 1981 and 1991 because fertility questions are only asked on the decennial censuses, the most accurate source for this type of information.

## CANADIAN SOCIAL TRENDS BACKGROUNDER

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## Changes in contraceptive methods over time

Canadian women have come a long way in managing their fertility. Before 1969, both the sale of contraceptives and the dissemination of information regarding contraceptive methods were prohibited under the Criminal Code.<sup>1</sup> As a result, until not so long ago, "natural" methods were the primary, and often only, means of birth control available. In contrast, today's couples have a wide range of reliable contraceptives at their disposal. Which ones they use depends on factors such as age, education, health concerns, ease of use, cost, marital status and the number of children the couple already have.

Between 1976 and 1995, significant changes occurred in the choice of contraceptives. The use of barrier methods increased, that of medical ones plummeted and natural methods nearly disappeared. In 1976, for example, 10% of married women reported using periodic abstinence or withdrawal as a means of birth control.<sup>2</sup> By 1984, that proportion had fallen to 4% and by 1995, to 2%.

Among the medical methods available, the birth control pill has gained ground at the expense of the intra-uterine device (IUD). Between 1984 and 1995, the proportion of married women using the pill increased by over a third, while the share of those who used the IUD fell by nearly half.

Finally, the use of condoms also gained popularity, rising from 6% in 1976 to 16% in 1995. In contrast, the use of diaphragms and spermicides has steadily declined until it practically disappeared by 1995. The increased popularity of the condom may be partly due to its prophylactic advantages in preventing sexually transmitted diseases, particularly AIDS, and men's apparent willingness to take greater responsibility for birth control.

<sup>1</sup> Liberalization of contraceptive use preceded changes in the law.

<sup>2</sup> Guilbert-Lantoin, C. (1990). "The contraceptive revolution in Canada". *Population*. Vol. 45 (2), pp. 361-391.

**Sterilization choices differ between religious groups** Catholics and Protestants, the two largest religious groups in Canada, report virtually identical choices in the use of contraceptives. It is mainly members of "other religions" (for example, Jews, Moslems, Hindus, Buddhists, Sikhs) and those with no religious affiliation who diverge from both the two dominant groups and each other. For example, the proportion of couples who do not use contraception is over twice as high among followers of "other religions" (36%) than among couples with no religious affiliation (15%). Catholics and Protestants fall roughly midway between the two. Similarly, the use of sterilization is much less widespread among couples reporting "other religions"; approximately one-fourth of these couples are sterilized for contraceptive purposes, compared with nearly half of Catholics, Protestants and those with no religious affiliation.

**Conclusion** Contraception plays an important role in the lives of couples who are able to have children. Being able to decide when to start a family, how many children to have and when, enables people to better plan the birth of their children. And when the time comes, they are able to end their reproductive years through sterilization.

In Canada, more than in other industrialized countries, the contraceptive revolution coincided with the drop in the fertility rate which followed the baby boom. While the populations of many European countries began to exhibit low fertility levels as early as the 1920s and 1930s, fertility in Canada did not decline significantly until the early 1960s. While the advent of truly effective and accessible contraceptives — including sterilization — has enabled couples to better manage their fertility, these methods were not in themselves responsible for the decision to have fewer children, or indeed any children at all. Rather, social and economic changes lie at the root of both the drop in desired family size and the low birth rate of contemporary times.

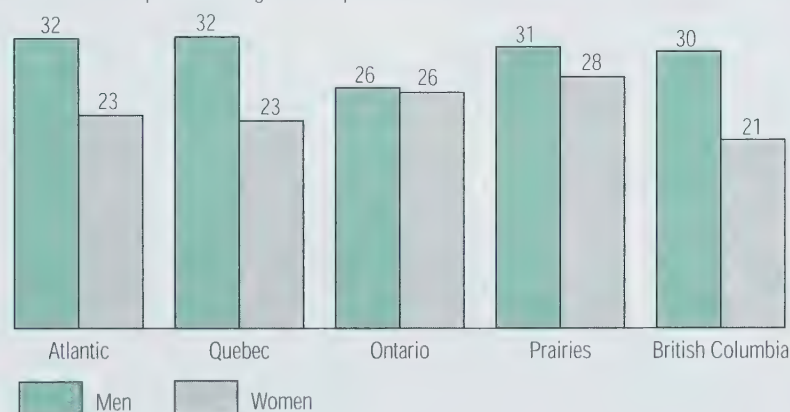
**Alain Bélanger** is a senior analyst with Demography Division, Statistics Canada.

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## Male contraceptive sterilization is least common in Ontario

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% of sterile couples according to which partner underwent sterilization



Source: Statistics Canada, 1995 General Social Survey.



# In & Out of low income

Every year since 1971, Statistics Canada has published figures that describe how many people live below its low income threshold. While these data are valuable, they cannot tell us how long these Canadians have been living in low income or whether their situation is likely to improve. Recently, however, new sources of longitudinal microdata have become available and researchers are now able to learn more about the duration of low income spells and the frequency with which they occur.

Using tax records, this article examines people whose pre-tax total family income fell below the Low Income Measure (LIM) at least once between 1982 and 1993. It estimates the chances of ending a period of low income, and the average duration of a low income spell, for different types of families.

by Mireille Laroche





### Marital status key factor in exiting low income spells sooner

The longer people remain in a low income situation, the smaller their chances of ending it. On average, a person's probability of exiting a low income spell falls from 53% after one year living below the LIM threshold, to 33% after three years. After five or more years, the chances drop to less than 25%.

The likelihood that a low-income person will rise above the LIM is influenced by factors such as age, sex, marital status

and number of children. And while it remains true that the shorter the low income spell, the higher the exit rate, the chances of exiting are better or worse depending on these characteristics. For example, in 1993, a man in a two-income husband-wife family with two children had a 74% chance of ending a low income spell after one year; the probability was considerably lower, at 52%, for a man in the same type of family but with only one income.

There is also a statistically significant difference between men's and women's chances of ending a low income spell. While the exit rates for married women are similar to those for men with the same characteristics, unmarried women have much lower exit rates than unmarried men. For example, after living below the LIM for one year, a divorced woman with two children in 1993 had a 37% chance of exiting, but after four years of low income, the likelihood had dropped

## CANADIAN SOCIAL TRENDS BACKGROUND

### What you should know about this study

This article uses Statistics Canada's Longitudinal Administrative Databank (LAD) to assess the duration of periods of low income for different family types between 1982 and 1993. The analysis focuses on people whose total family income before taxes fell below the Low Income Measure (LIM) threshold at least once during that twelve-year period. It includes individuals who filed each year from 1982 through 1993, as well as those who started out in the sample in 1982 but did not complete the entire period (for example, someone who filed 1982 through 1985 and then died). Non-residents, people living in the Yukon and the Northwest Territories, and children who filed tax returns, are excluded. This selection process created a sample of 17,390 individuals.

The LAD is based on a random sample of individuals selected from the T1 Family File, which contains information from Revenue Canada's annual T1 personal income tax form. Although the T1 form is filed by individuals, each taxfiler must provide information about his or her spouse, children and other dependants in order to receive refundable tax credits. This information then allows the individual taxfilers to be merged into census families. Unless stated otherwise, this article presents results only for the reference person in the family (the taxfiler), who was aged 35 to 39 in 1993.

**Family:** A husband-wife (or common-law) couple with or without single children; or a lone-parent with single children.

**Non-family person:** A person living alone, or living with someone who is not their spouse or single child.

**Total family income:** the sum total of all sources of income (before taxes) reported by the family. This includes government transfers and tax credits, as well as market income from wages and salaries, self-employment, and investment.<sup>1</sup>

**Low income measure (LIM):** 50% of median total pre-tax family income, after it is adjusted to take account of family

size and composition. All calculations use constant 1993 dollars.

**Exit a low income spell:** to rise above the LIM threshold, thus leaving or ending a period (spell) of low income.

**Re-enter a low income spell:** to fall again below the LIM threshold, thus beginning a second or subsequent period of low income.

**Calculating multiple spells of low income...** The persistence of low income would be significantly underestimated if the existence of multiple spells of low income were ignored. Estimates for multiple spells combine the probability of both exit and re-entry in a single function. The calculation also controls for unobserved personal characteristics such as education and ability, which vary from person to person and can affect the duration and frequency of low income spells. The estimation technique for multiple spells produces four categories of individuals with separate probability profiles: high exit/high re-entry, high exit/low re-entry, low exit/low re-entry, and low exit/high re-entry.

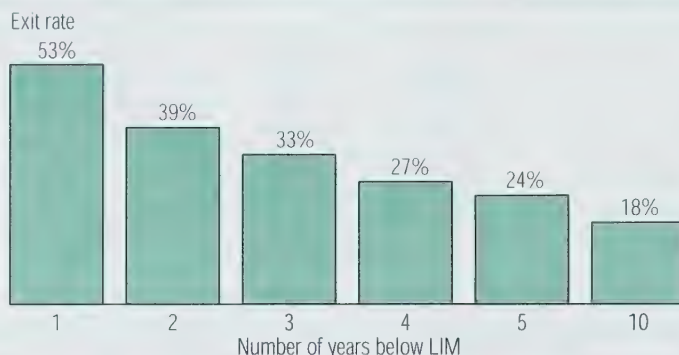
**...and duration of low income spells** The number of years that a low income person could expect to live below the LIM threshold was estimated by selecting individuals below the LIM in the first year of the study period and then calculating the probabilities for all the different possibilities that could occur in the following nine years. This model allowed the author to estimate the average time spent below the low income threshold over a ten-year period, as well as the probability of experiencing more than five years of ten years in a low income situation.

<sup>1</sup> Estimates were also calculated using private (market) income only, but results are not reported here.

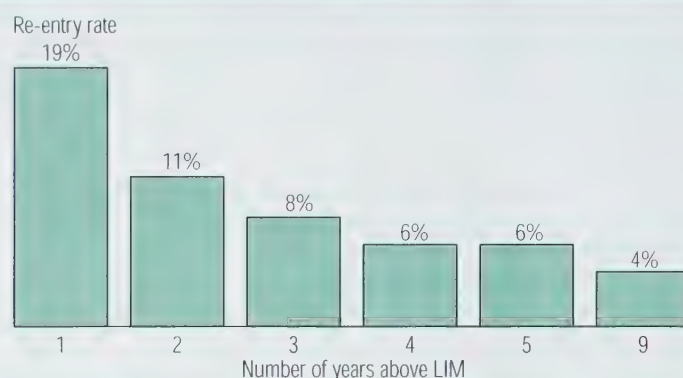


### Chances of ending a low income spell decline with years spent below the threshold...

CST



### ...and chances of re-entering a low income spell fall with years spent above the threshold



Source: Statistics Canada, Longitudinal Administrative Databank, 1982-1993.

### Having more than one income cut in half the number of years low income Canadians could expect to live below the LIM

CST

#### Average number of years below the LIM over next 10 years

	One child	Two children	Three or more children
<b>Women</b>			
Married			
two incomes	1.8	1.9	2.2
one income	3.4	3.6	4.2
Divorced	5.2	5.5	6.2
Separated	5.9	6.2	6.9
Single	5.1	5.4	6.1
<b>Men</b>			
Married			
two incomes	1.8	2.0	2.4
one income	3.5	3.8	4.6
Divorced	3.6	4.0	4.7
Separated	3.4	3.8	4.5
Single	3.6	4.0	4.7

Source: Department of Finance Working Paper No. 98-02.

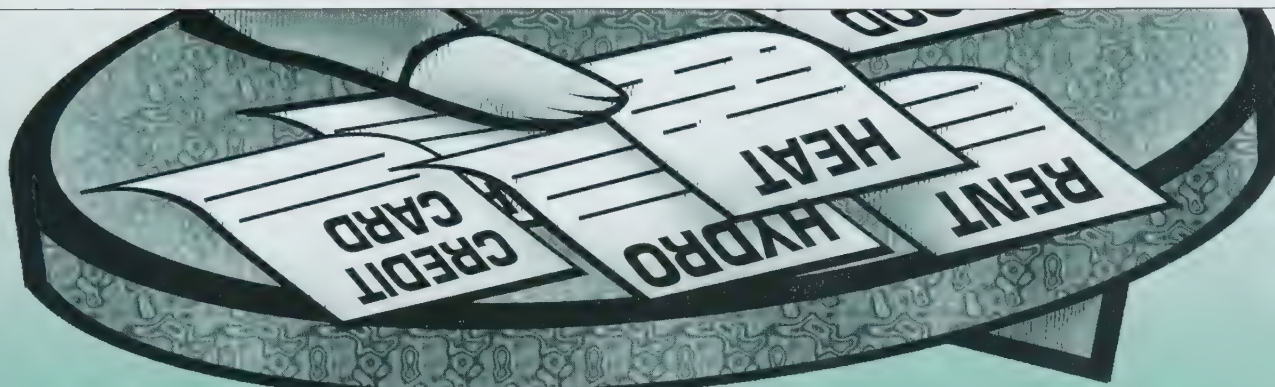
to 16%. For a divorced man with two children, the probabilities were 49% and 24%, respectively.

**Lone-parent families most likely to re-enter low income spell** In general, people who experienced a period of low income at some time during the period 1982 to 1993 recorded only one spell that lasted an average of two years. But the same person can flow into and out of low income more than once. This is why studies of the persistence of low income include two dimensions — the duration of a low income spell, and the frequency of such spells.

Analysis of the Longitudinal Administrative Databank (LAD) data shows that the longer a person is able to stay above the LIM threshold, the smaller their chances of experiencing a subsequent low income spell. In 1993, the likelihood of falling below the threshold again averaged 19% after one year above the LIM, and dropped to only 6% after four years. But the chances of slipping back into low income vary considerably with family status and gender. For men in husband-wife families with two incomes and two children, the probability of re-entering a low income spell was 9% after one year above the LIM, and only 3% if they managed to stay above it for four years. In contrast, for a divorced woman living with two children, the likelihood of re-entering a low income spell was 31% after one year above the threshold, and 12% after four years.

**Four in ten live in a chronic low income situation** The majority of low income persons do not experience repeated movements in and out of low income spells, that is, frequent exit from and re-entry into brief periods of low income.<sup>1</sup> There is a 60% chance that someone who falls below the LIM is experiencing a temporary setback — they will exit fairly quickly and are not likely to re-enter soon (and as the length of time living above the threshold increases, the re-entry rate diminishes even further).

<sup>1</sup> This finding is in contrast to results obtained in Canada by Barrett and Cragg's study of welfare spells (1995) and in Britain by Jarvis and Jenkins's study of low income spells (1997). Barret, Garry F. and M.I. Cragg, "Dynamics of Canadian Welfare Participation," *UBC Discussion Paper No. 95-08*. Jarvis, Sarah and Stephen P. Jenkins, "Low Income Dynamics in 1990s Britain," *Fiscal Studies*, Vol. 18 (2), pp. 123-142.



The probability of exiting or re-entering a low income spell largely depends on a person's family status

CST

	Exit rate after		Re-entry rate after	
	1 year	4 years	1 year	4 years
	%			
<b>Married, two incomes, no children</b>				
Male	69	42	12	4
Female	71	45	10	3
<b>Married, two incomes, 2 children</b>				
Male	74	48	9	3
Female	75	41	9	3
<b>Married, one income, no children</b>				
Male	46	22	28	10
Female	49	24	25	9
<b>Married, one income, 2 children</b>				
Male	52	26	23	8
Female	54	28	22	8
<b>Lone parent, divorced, 1 child</b>				
Male	54	27	21	8
Female	40	18	30	12
<b>Lone parent, divorced, 2 children</b>				
Male	49	24	23	9
Female	37	16	31	12
<b>Lone parent, single, 1 child</b>				
Male	55	29	21	8
Female	38	17	26	9
<b>Lone parent, single, 2 children</b>				
Male	51	25	24	9
Female	35	15	27	10
<b>Non-family person, single</b>				
Male	46	21	26	10
Female	38	17	25	9
<b>Non-family person, widowed</b>				
Male	46	22	29	11
Female	43	20	26	10

Note: Estimates calculated for persons aged 35 to 39 in 1993.

Source: Statistics Canada, Longitudinal Administrative Databank, 1982-1993.



On the other hand, there is a 40% chance that a person is experiencing a more chronic and persistent phenomenon. These Canadians face periods of low income that are both longer and more frequent, finding it more difficult to exit a low income spell and easier to fall below the LIM in subsequent years.

### **Lone-parent families spend the most years below the low income threshold**

A picture of low income persistence in Canada would not be complete without estimating the average number of years that low income individuals spend below the threshold over a lengthy period of time, in this case ten years.<sup>2</sup> The results confirm the

importance of socio-demographic factors; in short, being a woman and living in a lone-parent family significantly increased the probability of falling below the threshold and remaining in a low income situation for a considerable length of time.

Depending on the number of children they had, low income women without husbands could expect to spend 5.1 to 6.9 years out of ten living below the LIM. In contrast, being married considerably improved a woman's economic prospects; low income women in a husband-wife family with children would average 3.4 to 4.2 years below the LIM if the family had only one income, or 1.8 to 2.2 years if the family had two incomes.

For men, however, an additional income was better proof than marriage against a lengthy period of low income. Low income men in a two-income husband-wife family could expect to live below the LIM for an average of 1.8 to 2.4 years, depending on the number of children in the family. But married men in one-income families, and male lone-parents, were likely to spend an average of 3.5 to 4.5 years in a low income situation.

**Summary** There is little evidence that people repeatedly move into and out of low income spells. In fact, analysis over a ten-year period shows that roughly 60% of low income Canadians under age 65 are only temporarily living in straitened economic circumstances. They quickly exited the current spell of low income and were not likely to repeat it. However, socio-demographic characteristics play a key role in determining the duration and frequency of low income spells. Analysis suggests that a significant proportion of low income families headed by women remain below the low income threshold for long periods of time.

<sup>2</sup> Estimates were calculated for individuals who experienced at least one low income spell during the study period (1982 to 1993) and who were aged 45 in 1982.

- This article is adapted from *The Persistence of Low Income in Canada, 1982-1993*, Department of Finance Working Paper No. 98-02.

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## **CANADIAN SOCIAL TRENDS BACKGROUNDER**



### **Other longitudinal studies of low income**

#### **Chances of ending low income spell fade with time in the United States**

Researchers in the United States have been among the first to model the dynamics of low income with a duration analysis approach. A 1986 study<sup>1</sup> compared individuals just entering a low income spell with those who currently have low income; it found that the majority of people who fall below the low income threshold will be poor for a relatively short period of time, but the majority of people who are currently poor are in the midst of a long spell of low income. A 1995 update of this study<sup>2</sup> examined the frequency of multiple spells of poverty and extended the time period of the study. The results showed that, over time, the chances of ending a low income spell declined, especially for someone living in a female-headed household. Moreover, over half of the people who ended a low income spell would experience another spell within five years.

#### **Changed family circumstances change income status in Canada**

Analysis of longitudinal data from the Survey of Labour and Income Dynamics (SLID) indicates that only a slight majority of Canadians who experience low income remain below the low income threshold for two consecutive years. About 4.4 million individuals had incomes below the low income cut-off (LICO) in either 1993 or 1994; of these people, 2.3 million (or 52%) had low incomes in both years.<sup>3</sup>

The SLID study also showed that chances of entering or exiting a low income spell were high following a change in family structure. In 1994, 41% of all individuals who entered low income, and 28% who exited, had undergone a change in family composition. Marriage (including common-law) usually had a positive effect on a person's financial situation: two-thirds of low income Canadians who married in 1993 rose above the threshold in 1994. By contrast, separation often precipitated a period of low income, and one-quarter of people who were above the cut-off when they separated in 1993 fell below it in 1994.

<sup>1</sup> Bane, Mary Jo and Daniel T. Ellwood, "Slipping into and Out of Poverty: The Dynamics of Spells," *Journal of Human Resources*, Vol. 1 (2), pp. 1-23.

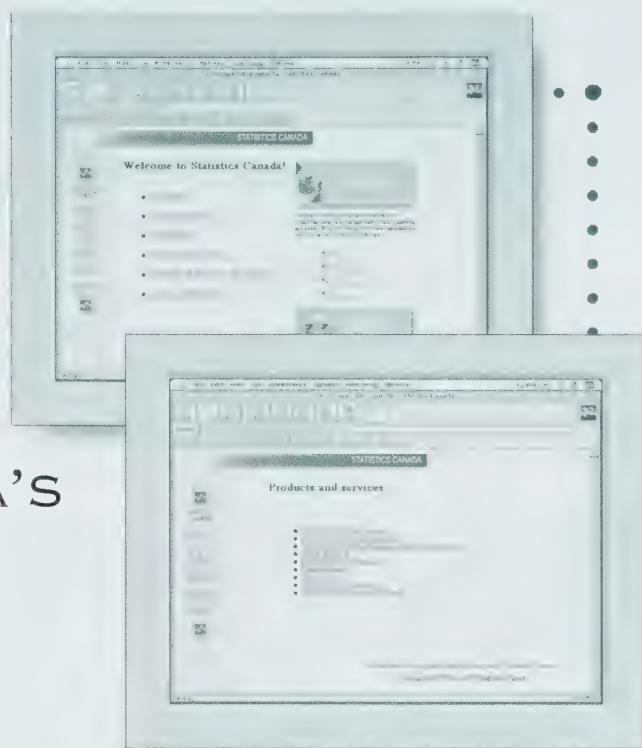
<sup>2</sup> Stevens, Ann Huff, "Climbing out of Poverty, Falling Back in: Measuring the Persistence of Poverty Over Multiple Spells," *National Bureau of Economic Research, Working Paper No. 5390*.

<sup>3</sup> Although the results of the SLID study support those of the LAD study, readers should note that the methodology is quite different. The SLID study used the low income cut-off (LICO) rather than the LIM; the analysis was conducted using after-tax income, not income before tax; and the families studied were economic not census families. For more information, refer to *Crossing the Low Income Line*, Statistics Canada Product No. 75F0002E, July 1997.



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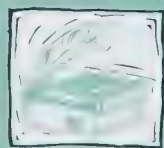
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## EDUCATORS' NOTEBOOK

*Suggestions for using Canadian  
Social Trends in the classroom*

Lesson plan for "Religious observance, marriage and family"

### Objectives

- 1. To identify some of the effects of religious observance on Canadians.
- 2. To become aware of religious traditions of various religious groups.

### Method

- 1. Provide each student with a copy of the article "Religious observance, marriage and family"; have them read the article, selecting and recording key facts or ideas in point form.
- 2. Conduct an informal survey of religious affiliations among your students. How many attend religious services regularly (weekly)? How do the results compare with those reported in the article?
- 3. Have the class discuss what effect religious observance has on their lives or their parents' lives.
- 4. Have members of the class describe a religious celebration for their religion and the significance of it.
- 5. Discuss why young adults don't attend religious services as often as older adults.

### Using other resources

- 1. Use Statistics Canada's E-STAT CD-ROM to develop a profile of religions from the 1991 Census for your town or city. Select the (2B) detailed questionnaire database on the E-STAT CD-ROM. Identify the differences in the religious distribution between your town or city and another major city. The same information on religions can be obtained from the Statistics Canada website at <http://www.statcan.ca/english/Estat/estat.htm>. Access **E-STAT on SchoolNet** from our website. Select **Entrance E-Stat**. From the census menu select the **1991 Census**. Select **1991 (2B) detailed questionnaire**, and **39 cities (by neighbourhood)**.
- 2. Reginald Bibby's article, "The persistence of christian religious identification in Canada," in the Spring 1997 edition of *Canadian Social Trends* discussed what impact the religion of fathers and mothers had on the religion of children living at home.



### Share your ideas!

Do you have lessons using CST that you would like to share with other educators? Send your ideas or comments to Joel Yan, Dissemination Division, Statistics Canada, Ottawa, K1A 0T6. FAX (613) 951-4513 or Internet e-mail: [yanjoel@statcan.ca](mailto:yanjoel@statcan.ca).



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# SOCIAL INDICATORS

	1990	1991	1992	1993	1994	1995	1996	1997
<b>POPULATION</b>								
Canada, July 1 (000s)	27,790.6 <sup>IR</sup>	28,111.0 <sup>PD</sup>	28,532.5 <sup>PD</sup>	28,895.7 <sup>PD</sup>	29,264.7 <sup>PD</sup>	29,616.5 <sup>PD</sup>	29,959.5 <sup>PR</sup>	30,285.8 <sup>PR</sup>
Annual growth (%)	1.5	1.2	1.5	1.3	1.3	1.2	1.2	1.1
Immigration <sup>1</sup>	202,979 <sup>F</sup>	219,250 <sup>F</sup>	241,810 <sup>F</sup>	265,405 <sup>F</sup>	234,457 <sup>F</sup>	200,123 <sup>R</sup>	216,764 <sup>R</sup>	223,238 <sup>R</sup>
Emigration <sup>1</sup>	39,760	43,692	45,633 <sup>PD</sup>	43,993 <sup>PD</sup>	45,280 <sup>PD</sup>	47,041 <sup>PD</sup>	47,230 <sup>PP</sup>	49,633 <sup>PR</sup>
<b>FAMILY</b>								
Birth rate (per 1,000)	15.3	14.3	14.0	13.4	13.2	12.9	12.5 <sup>E</sup>	*
Marriage rate (per 1,000)	6.8	6.1	5.8	5.5	5.5	5.4	5.2	*
Divorce rate (per 1,000)	2.8	2.7	2.8	2.7	2.7	2.6	2.4	*
Families experiencing unemployment (000s)	879	1,096	1,184	1,198	1,130	1,044	1,079	1,048
<b>LABOUR FORCE</b>								
Total employment (000s)	13,165	12,916	12,842	13,015	13,292	13,506	13,676	13,941
– goods sector (000s)	3,809	3,582	3,457	3,448	3,545	3,653	3,681	3,769
– service sector (000s)	9,356	9,334	9,385	9,567	9,746	9,852	9,995	10,172
Total unemployment (000s)	1,164	1,492	1,640	1,649	1,541	1,422	1,469	1,413
Unemployment rate (%)	8.1	10.4	11.3	11.2	10.4	9.5	9.7	9.2
Part-time employment (%)	17.0	18.1	18.5	19.1	18.8	18.6	18.9	19.0
Women's participation rate (%)	58.7	58.5	58.0	57.9	57.6	57.4	57.6	57.4
Unionization rate – % of paid workers	34.7	35.1	34.9	34.3	–	–	–	33.9
<b>INCOME</b>								
Median family income	45,618	46,389	47,199	46,717	48,091	48,079	49,411	*
% of families with low income (1992 Base)	12.3	13.0	13.5	14.6	13.5	14.5	14.5	*
Women's full-time earnings as a % of men's	67.7	69.6	71.9	72.2	69.8	73.1	*	*
<b>EDUCATION</b>								
Elementary and secondary enrolment (000s)	5,141.0	5,218.2	5,284.2	5,347.4 <sup>P</sup>	5,402.4 <sup>P</sup>	5,458.5 <sup>R</sup>	5,442.2 <sup>E</sup>	5,594.9 <sup>E</sup>
Full-time postsecondary enrolment (000s)	856.6	903.1	931.0	951.1 <sup>P</sup>	964.7 <sup>E</sup>	962.7 <sup>R</sup>	971.5 <sup>E</sup>	980.3 <sup>E</sup>
Doctoral degrees awarded	2,673	2,947	3,136	3,356	3,552	3,716 <sup>R</sup>	3,798 <sup>E</sup>	3,727 <sup>E</sup>
Government expenditure on education – as a % of GDP	5.8	6.3	6.4	6.2	5.9	5.7	7.4	*
<b>HEALTH</b>								
% of deaths due to cardiovascular disease – men	37.3	37.1	37.1	37.0	36.3	36.0	27.4	*
– women	41.2	41.0	40.7	40.2	39.7 <sup>R</sup>	39.3	27.6	*
% of deaths due to cancer – men	27.8	28.1	28.4 <sup>R</sup>	27.9	28.3	30.3	28.4	*
– women	26.8	27.0	27.3	26.9	27.0	27.3	27.8	*
Government expenditure on health – as a % of GDP	6.2	6.7	6.8	6.7	6.2	6.1	6.6 <sup>E</sup>	4.8 <sup>E</sup>
<b>JUSTICE</b>								
Crime rates (per 100,000) – violent	970	1,056	1,077 <sup>R</sup>	1,072	1,038 <sup>R</sup>	995	973	*
– property	5,593	6,141	5,868 <sup>R</sup>	5,524 <sup>R</sup>	5,212 <sup>R</sup>	5,235 <sup>R</sup>	5,192	*
– homicide	2.4	2.7	2.6	2.2	2.0	2.0	2.1	*
<b>GOVERNMENT</b>								
Expenditures on social programmes <sup>2</sup> (1995 \$000,000)	183,505.7 <sup>R</sup>	190,745.5 <sup>R</sup>	207,245.8 <sup>R</sup>	214,317.3 <sup>R</sup>	215,567.4	208,494.6	*	*
– as a % of total expenditures	56.0 <sup>R</sup>	56.8 <sup>R</sup>	58.5 <sup>R</sup>	60.0 <sup>R</sup>	60.1	58.3	*	*
– as a % of GDP	24.5 <sup>R</sup>	26.7 <sup>R</sup>	28.8 <sup>R</sup>	29.4 <sup>R</sup>	28.2	26.9	*	*
UI beneficiaries (000s)	3,261.0	3,663.0	3,658.0	3,415.5	3,086.2	2,910.0	*	*
OAS and OAS/GIS beneficiaries <sup>m</sup> (000s)	3,005.8	3,098.5	3,180.5	3,264.1	3,340.8	3,420.0	3,500.2	*
Canada Assistance Plan beneficiaries <sup>m</sup> (000s)	1,930.1	2,282.2	2,723.0	2,975.0	3,100.2	3,070.9	*	*
<b>ECONOMIC INDICATORS</b>								
GDP (1992 \$) – annual % change	–	–	+0.7	+2.5	+3.9	+1.9	+1.6	+3.9
Annual inflation rate (%)	4.8	5.6	1.5	1.8	0.2	2.1	1.6	1.6
Urban housing starts	150,620	130,094	140,126	129,988	127,346	89,526	101,804	123,221

– Not available

\* Not yet available

<sup>P</sup> Preliminary data<sup>E</sup> Estimate<sup>m</sup> Figures as of March<sup>IR</sup> Revised intercensal estimates<sup>PD</sup> Final postcensal estimates<sup>PP</sup> Preliminary postcensal estimates<sup>PR</sup> Updated postcensal estimates<sup>R</sup> Revised data<sup>F</sup> Final data<sup>1</sup>For year ending June 30.<sup>2</sup>Includes Protection of Persons and Property; Health; Social Services; Education; Recreation and Culture.



### Child abductions decline after early 1990s



Between 1983 and 1992, the rate of child abduction increased from 11.8 for every 100,00 persons under 16 to 19.5. The rate steadily declined to 15.1 by 1996, this translated to 964 children who were victims of attempted or completed abductions. Parents were responsible for 62% of all abductions. However, abductions accounted for less than 1% of missing children. Of about 56,000 children under 18 years reported missing in Canada in 1996, 78% were runaways. Other reasons why children went missing included wandering off, being lost, and disappearing from institutional care or treatment centres.

**Juristat: Missing and Abducted Children, 1998**, Vol.18, no.2  
Statistics Canada, Catalogue no. 85-002-XPE

### Education prices rise slower than CPI



In 1996, the prices of goods and services in education increased less than overall inflation: 0.5% compared with 1.6%. This reflects the fact that teachers' salaries — which have grown less than 2% since 1993 — are the major component of the Education Price Index (EPI), accounting for over 70% of school boards' operating expenses. Other salaries in the education sector have also increased modestly in recent years. For the third consecutive year, the non-salary component of the EPI — school facilities, supplies and services — remained unchanged.

**Data available for 1971 to 1996**  
Statistics Canada, CANSIM:T00590304

### Tourism industry records strong growth



Spending on tourism in Canada reached almost \$44 billion in 1997, an increase of over 5% since 1996 (current dollars). Growth occurred throughout most of the sector, with important advances in passenger air transport (up 10%). For the third consecutive year, the rate of job creation in the tourism industry exceeded that in the total business sector, up more than 2% from 1996 as employment rose to over 503,000.

**National Tourism Indicators, Fourth quarter 1997**  
Statistics Canada, Catalogue no. 13-009-XPB

### Early start to smoking makes quitting more difficult



The earlier people begin smoking, the more cigarettes they are likely to smoke each day and the less likely they are to quit. Among daily smokers aged 21 to 39, the odds of being a heavy smoker were 2.5 times higher for people who started at age 13 or younger than for those who started after 19. In addition, people who started smoking in early adolescence were much less likely to quit. Just 18% of smokers who started when they were 13 or younger had stopped within 10 years, compared with 42% of those who started at the age of 20 or older.

**Health Reports, Spring 1998**  
Statistics Canada, Catalogue no. 82-003-XPB

### Death rate from cancer falls for under 60s



Cancer is primarily a disease of older Canadians: 71% of new cases and 80% of deaths in 1998 will occur among those who are 60 years and over. In contrast, for people under 60, cancer mortality rates have generally been falling for almost three decades. In 1998, an estimated 129,200 cases of cancer will be diagnosed in Canadians of all ages and about 62,700 individuals will die from it. Breast cancer will be the most frequent diagnosis among women, and prostate cancer among men. The type of cancer that kills most frequently, however, is lung cancer. Almost one-third of cancer deaths among men and one-fifth among women are due to lung cancer.

**Canadian Cancer Statistics, 1998**  
[www.cancer.ca/stats/](http://www.cancer.ca/stats/)

### Women and older workers take more time off work



In any given week in 1997, almost half a million full-time paid workers lost some work time because of personal reasons (which includes own illness or disability and personal or family responsibilities). Over the whole year, women were absent for an average of 9 days (excluding maternity leave) while men were off work for 6 days. The number of work-days lost to personal reasons also increased with age, with full-time workers aged 55 to 64 booking about twice as much time off as those aged 15 to 24 (11 versus 5 days); the difference was mainly due to the higher incidence of illness or disability absences among older workers. Unionized workers (11 days) missed almost twice as much work as their non-unionized counterparts (6 days), probably because most collective agreements include paid sick leave entitlements.

**Work Absence Rates, 1980 to 1997**  
Statistics Canada, Catalogue no. 71-535-MPB, no. 9

### Growth of women's earnings outpaces men's in 1996



The earnings of women working full-time, full-year increased by 1.9% in 1996, to \$30,700, compared with growth of 1.5% for their male counterparts, to \$41,800 (after adjusting for inflation). The female-to-male earnings ratio, with women making an average of 73 cents for each dollar earned by men, reached a new high. Marital status has a significant impact on the earnings ratio, as single women earn almost as much as single men (0.93 to 1.0), but married women earn substantially less than married men (0.69 to 1.0). For women who were widowed, divorced or separated, the ratio was 80 cents for every dollar earned by men.

**Earnings of Men and Women, 1996**  
Statistics Canada, Catalogue no. 13-217-XPB

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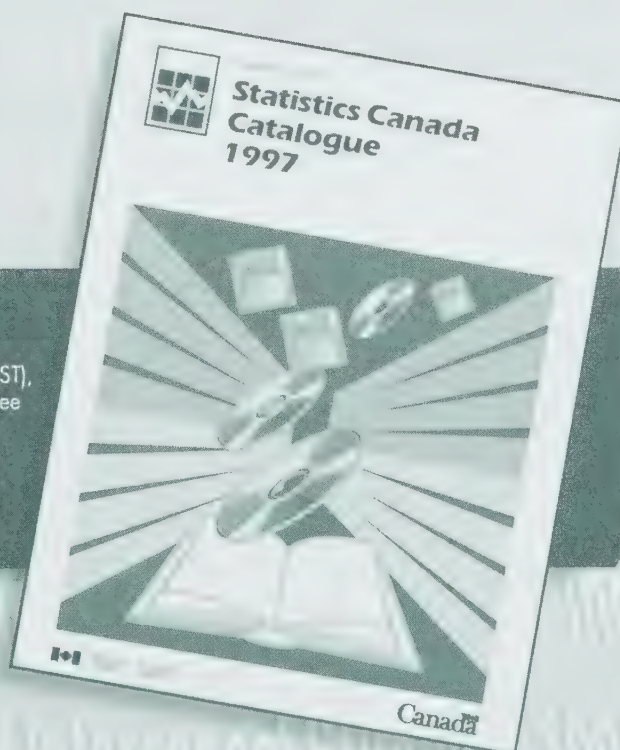
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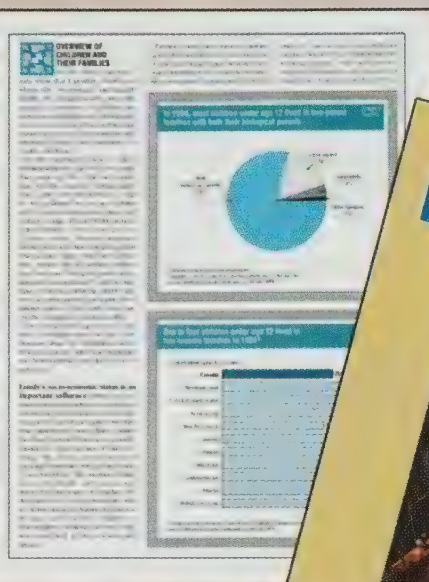
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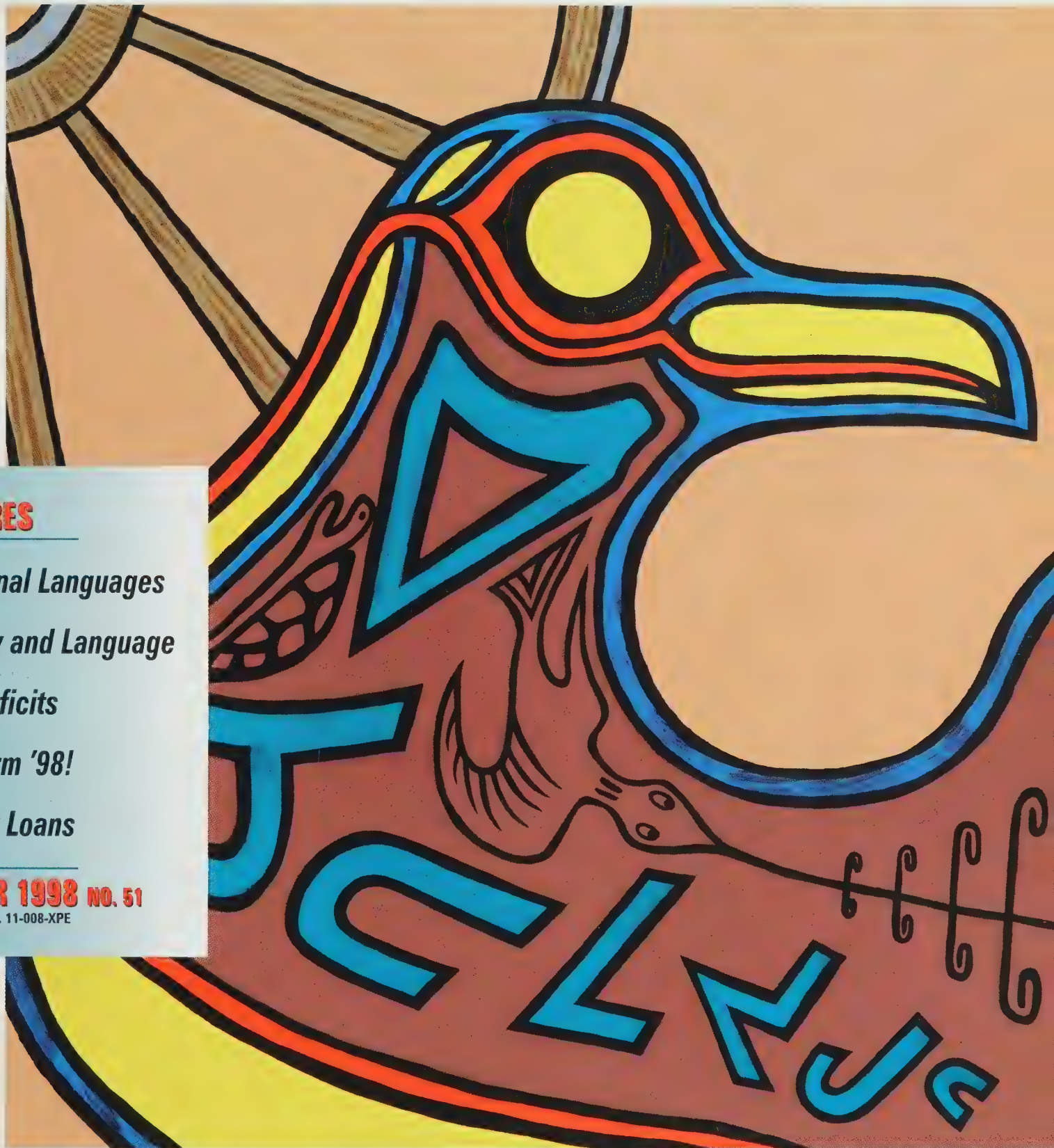
# CANADIAN SOCIAL TRENDS

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## FEATURES

*Aboriginal Languages  
Literacy and Language  
Skill Deficits  
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**Acknowledgements**  
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**Canadian Social Trends** (Catalogue no. 11-008-XPE; aussi disponible en français, n° 11-008-XPF au catalogue) is published quarterly as a standard product. The prices for delivery in Canada are \$11.00 per issue and \$36.00 for a one year subscription, and Outside Canada for US \$11.00 per issue and US \$36.00 for a one year subscription. Students 30% discount. Please order by mail, at Statistics Canada, Dissemination Division, Circulation Management, 120 Parkdale Avenue, Ottawa, Ontario, K1A 0T6; by phone at (613) 951-7277 or 1 800 770-1033; by fax, at (613) 951-1584 or 1 800 889-9734; or by internet, at [order@statcan.ca](mailto:order@statcan.ca). For changes of address, please provide both old and new addresses. Statistics Canada products may also be purchased from authorized agents, bookstores and local Statistics Canada offices. This product is also available on the Internet as Catalogue no. 11-008-XIE for CDN \$8.00 per issue or CDN \$27.00 for a one-year subscription. Users can obtain single issues or subscribe at <http://www.statcan.ca/cgi-bin/downpub/feepub.cgi>. Correspondence may be addressed to the Editor-in-Chief, **Canadian Social Trends**, 7th floor, Jean Talon Building, Ottawa, Ontario, K1A 0T6. **Fax number** (613) 951-0387. **Internet e-mail:** [cstsc@statcan.ca](mailto:cstsc@statcan.ca). **Canadian Social Trends** is not responsible for unsolicited materials. Published by authority of the Minister responsible for Statistics Canada. © Minister of Industry, 1998. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without prior written permission from Licence Services, Marketing Division, Statistics Canada, Ottawa, Ontario, Canada, K1A 0T6.

Indexed in the **Canadian Magazine Index**, **Public Affairs Information Service, Inc.** and available on-line in the **Canadian Business and Current Affairs Database**.

ISSN 0831-5698  
(Print)

ISSN 1481-1634  
(Electronic)

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## Cover Illustration

**Ron Noganosh** was born May 3, 1949 on the Magnetawan Reserve in Ontario. He is of Ojibway descent. He studied Graphic Design at George Brown College in Toronto, Ontario and holds a Fine Arts degree from the University of Ottawa, Ontario where he focused his talent on print and sculpture. He continues to support several facets of his Aboriginal heritage.



# LITERACY: Does Language Make A Difference?

by Jean-Pierre Corbeil

Literacy involves much more than merely mastering the alphabet: people must be able to process increasingly sophisticated written information in both numerical and alphabetical form. In modern societies, literacy is closely linked to economic opportunity, and high level literacy skills have a strong correlation with high income and stable employment. Many other elements of a rewarding life, including active participation in the community, are also enhanced by good literacy skills.

According to the 1994 International Adult Literacy Survey (IALS), literacy skills differ considerably between Canada's two official language groups. People whose mother tongue is English generally have higher scores on literacy tests than those whose mother tongue is French. In fact, the disparities are large: two to three times as many anglophones as francophones scored at the highest skill levels.<sup>1</sup> This article first examines the literacy profiles of Canada's two main linguistic groups in terms of such variables as education, age and reading habits, and then calculates

## CST What you should know about this study

This article draws on data from the 1994 International Adult Literacy Survey (IALS), a joint effort by seven countries to assess the literacy skills of their citizens. The purpose of the IALS literacy tests was to determine if adults correctly answer test items that duplicate the tasks they encounter in their daily lives. In Canada, the survey was conducted among 5,660 individuals aged 16 and over. Respondents were able to take the test in the official language of their choice; about 4,000 respondents took the test in English and about 1,700 in French. Each respondent's test results were plotted on a 500-point scale, and divided into five levels of literacy, with Level 1 being the lowest (0-225 points) and Level 5 the highest (more than 375 points).

Three types of literacy were tested – prose, document and quantitative. In this study, the patterns identified are similar for all three literacy measures, so results are presented only for prose literacy unless otherwise stated.

Respondents are defined as francophone or anglophone on the basis of their mother tongue, that is, the language first learned in childhood and still understood. Since respondents were allowed to report more than one mother tongue, the French mother tongue category includes respondents whose mother tongue is "French and another language," if they chose to do the IALS test in French. Similarly, English mother tongue includes respondents whose mother tongue is "English and another language" if they did the literacy test in English.

- For more information about the IALS, see *Reading the Future: A Portrait of Literacy in Canada*. 1996. Statistics Canada, Human Resources Development Canada and National Literacy Secretariat. Catalogue no. 89-551-XPE.

1. *Reading the Future: A Portrait of Literacy in Canada*. 1996. Statistics Canada, Human Resources Development Canada and National Literacy Secretariat. Catalogue no. 89-551-XPE; p. 33.

the effect of these variables on the "literacy gap" between the two groups.

### A general portrait of literacy levels in Canada

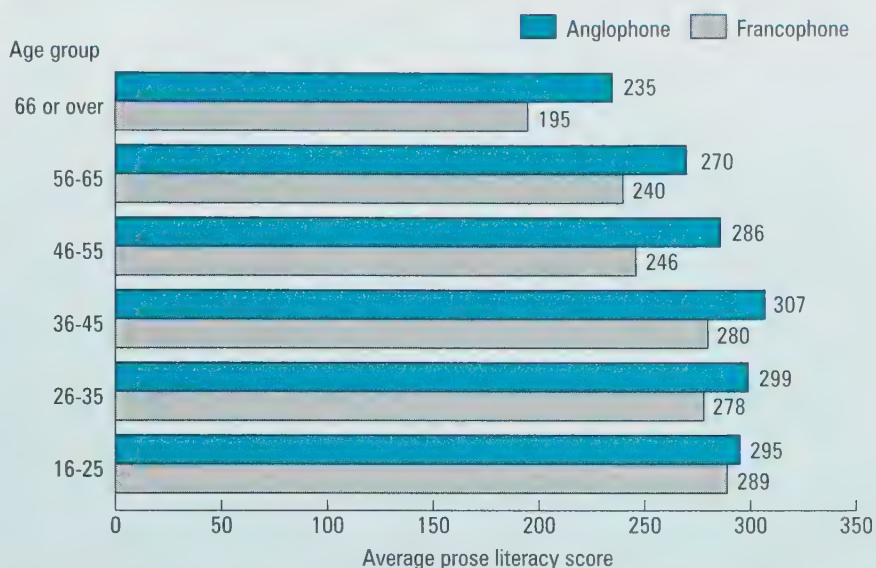
Many factors may contribute to the differences in literacy levels between English and French Canadians, but historically lower levels of education among francophones is undoubtedly one of the major causes.<sup>2</sup> Since formal schooling is one of the principal determinants of literacy skills, a person without much education is considerably disadvantaged. On the other hand, the advantage of higher education, on both linguistic groups, is profound: although overall literacy levels are higher for anglophones, the literacy skills of anglophones and francophones with the same level of schooling are very similar.

Literacy skills are also influenced by age. Generally speaking, Canadians under 45 in both linguistic groups score higher on the literacy tests because they have more schooling than older adults. There is a 40-point difference (on a 500-point scale) in literacy scores between anglophones and francophones over age 65, but the gap narrows among younger age groups until it almost disappears for those aged 16 to 25. Steady improvement in educational attainment has erased the literacy disparity between young Canadians in the two linguistic groups. The weaker literacy skills of older Canadians, both francophone and anglophone, are of continuing concern to literacy researchers.

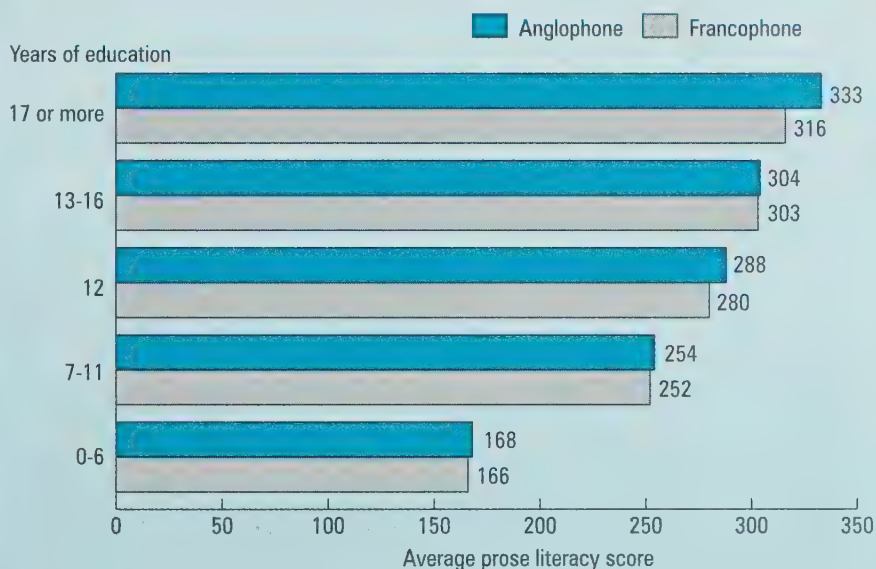
While education provides the groundwork for strong literacy skills, some adults may have a relatively high level of literacy but a low level of formal education, while others may

CST

The anglophone-francophone literacy gap increases with age...



...but decreases with same level of education



Source: Statistics Canada, International Adult Literacy Survey, 1994.

demonstrate poor literacy skills despite having many years of formal schooling. These findings suggest that daily reading and writing activities are also necessary to the maintenance or improvement of literacy skills. Indeed, occupations which demand a lot of reading and writing, along with a well-developed "literacy habit" at

home, are strongly associated with high scores on the IALS tests.<sup>3</sup>

Job-related literacy tasks – writing letters or memos and reading reports,

2. In 1961, 54% of francophone men in the workforce had less than nine years of formal education, compared with 31% of their anglophone counterparts.

3. *Reading the Future: A Portrait of Literacy in Canada*; pp. 35-79.



manuals or schematic drawings – are generally performed more often by anglophones than francophones.<sup>4</sup> An index of reading intensity, based on the frequency and variety of reading tasks that individuals perform, shows a significant gap between anglophones (3.1) and francophones (2.6). Even when they work in the same type of occupation, anglophones record average literacy scores between 10 and 35 points higher than francophones.

Anglophones generally engage more frequently in literacy activities at home as well – reading books or daily newspapers, visiting the library, or writing letters. According to the IALS, they record an at-home reading intensity of 3.0, compared with 2.6 for francophones. As might be expected, individuals with higher level skills perform at higher levels of intensity. However, it is not certain whether people read more because they have good skills, or whether they have developed good skills by reading more.

### What explains the literacy gap?

In Canada as a whole, the average prose literacy score is 261 for francophones and 288 for anglophones. But when so many characteristics appear to have such a powerful influence on literacy skills, averages are not very useful in understanding why these literacy rates should differ by almost 10% (27 points). Using a statistical technique called regression modelling, it is possible to predict the effect of a specific characteristic on a person's literacy skills, while removing the effects of ("controlling for") other variables. In this way, the model can identify the factors that contribute to

the literacy gap by estimating how many points each factor adds to a person's basic literacy score. The data used in the Canada-level regression are for anglophones across Canada and for francophones living in Quebec.

If language is considered to be the only factor that can explain differences in literacy skills, then a person whose mother tongue is English will,

*Schooling (and not language) explains the great majority of the difference in anglophone and francophone literacy scores.*

on average, have a literacy score 27 points higher than a person whose mother tongue is French (Model 1).

But if education is also considered to be an explanatory factor, and its effect is controlled for, the gap due to mother tongue almost closes – the difference in average anglophone and francophone scores is only 5 points (Model 2). In other words, schooling (and not language) explains the great majority of the difference in anglophone and francophone literacy scores.

The literacy gap narrows still further, to a scant 1 point, when the other characteristics discussed earlier – age, reading intensity, literacy activities and occupation – are taken into account (Model 3). Indeed, in this more complex model, the importance of language as an explanatory factor ceases to be statistically significant.

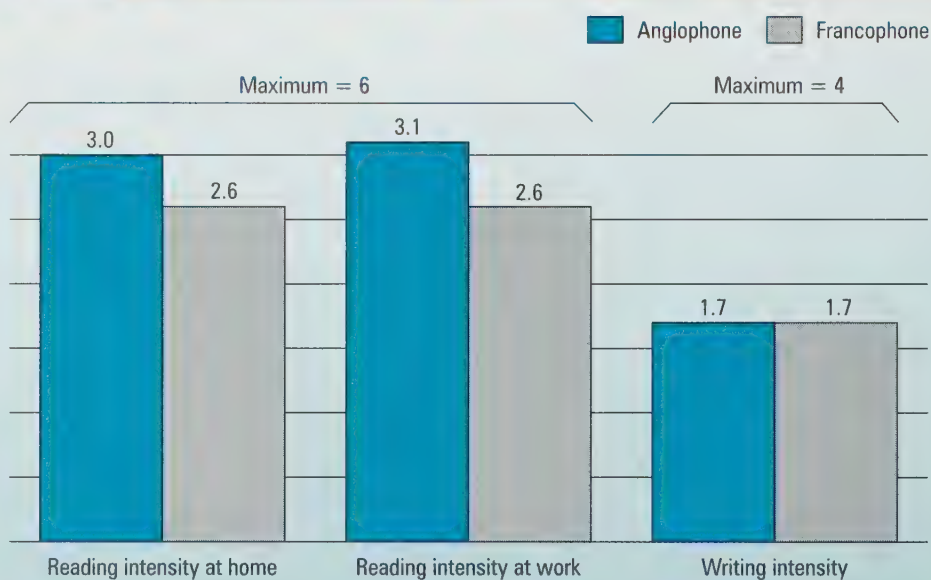
Clearly, the key determinant of people's literacy scores is not their mother tongue, it is educational attainment. Every year of schooling increases a person's literacy score by more than 7 points (Model 3). For

example, someone with a university degree (17 years of formal education adding 119 points to the base score) will generally have a much higher literacy score than someone with less than high school (say Grade 9, which adds only 63 points).

Age remains a significant contributor to literacy skills: being under the age of 45 improves a person's literacy score by 16 points, even when the impact of education and other variables are controlled for.<sup>5</sup> This finding is a bit

**CST**

Reading intensity was higher for anglophones, but writing intensity was the same for both groups



Source: Statistics Canada, International Adult Literacy Survey, 1994.

4. These results are for prose and quantitative literacy. Francophones more frequently performed tasks related to document literacy in the workplace.

surprising, since age is closely linked with schooling and controlling for it might have been expected to produce less variation between the age groups. The lower scores for older respondents may reflect the cumulative effect of reading less frequently over a lifetime.

The regression model shows that many leisure literacy activities also have a significant effect on literacy scores. When all other factors are controlled for, people who read a newspaper at least once a week added almost 13 points to their literacy score, while reading a book at least once a week added another 11 points.

### Literacy skills in minority language communities<sup>6</sup>

These regression models are very successful at explaining the factors underlying the literacy disparity between the two linguistic groups at the Canada level. However, because the model compares francophones in Quebec with anglophones in Canada, its results are applicable only to people in majority-language communities. Is the model equally valuable in explaining the literacy gap for the French-language minority communities in New Brunswick and Ontario?<sup>7</sup>

The size of the linguistic literacy gap between anglophones and francophones is about the same in both provinces — 36 points in New Brunswick and 35 in Ontario — but here most similarities end. In New Brunswick, the effect of education appears to be small, only narrowing the gap to 30 points between anglophone and francophone literacy scores; in Ontario, however, the gap is halved to 17 points.

5. The importance of one variable cannot be compared to another using the "points added" estimate; for example, age is not twice as important as education (16 points versus 7 points). The relative importance of each variable is provided by the standardized estimate (beta coefficient), which is not shown in this article.



## Compared with education, the effect of mother tongue on literacy is minimal

	Model 1	Model 2	Model 3
<b>Base literacy score</b>	<b>261</b>	<b>148</b>	<b>146</b>
<i>Points added to base score if mother tongue is English (Literacy gap)</i>	27	5	1*
<i>Points added to base score by each year of education</i>		10	7
<i>Points added to base score if</i>			
Less than 45 years old			16
Reading intensity greater than 0 (maximum=6)			2
Visit a library at least once a month			9
Write letters or other text at least once a month			5
Read newspapers at least once a week			13
Read books at least once a week			11
Watch TV less than one hour a day			6
<i>Points added to base score if occupation is<sup>1</sup></i>			
Management/administration			-10
Professional			9
Clerical			-1*
Sales and service			8
Machine operation			-1*

\* Not statistically significant.

1. Compared with Agriculture and related occupations.

Source: Statistics Canada, International Adult Literacy Survey, 1994.

The full model does not explain much more of the disparity in either province. After controlling for all selected variables except mother tongue, anglophones in New Brunswick still averaged 22 points more than francophones in the literacy test, while those in Ontario generally scored 14 points higher. Since these results are substantially different from those at the Canada level, they suggest that other

6. In Ontario, only 52% of francophones chose to do the tests in French, while in New Brunswick, 89% did so. However, there was little difference in the scores of francophones who did the tests in English rather than in French.

7. Because the sample size for anglophones in Quebec was too small to produce reliable estimates, Quebec is not included in the analysis of minority-language communities.



factors play a significant role in the literacy gap in minority-language communities.

One explanation is limited access to reading material in one's mother

tongue. The regression model shows that literacy activities such as visiting the library, writing letters and reading books can significantly increase literacy scores, particularly in New

Brunswick. Yet IALS data show that francophones in New Brunswick are least likely to practice them. Quite possibly, francophones, particularly those in the rural areas of northern and eastern New Brunswick, may not have had easy access to French-language reading material which could help them maintain or strengthen their literacy skills.



## Francophones in New Brunswick were least likely to practice regular literacy activities at home

	Mother tongue	
	English	French
	%	
<b>Read daily newspapers</b>		
Canada	66	54
New Brunswick	64	49
Quebec	--	53
Ontario	69	62
<b>Visit a library at least once a month</b>		
Canada	28	18
New Brunswick	16	13
Quebec	--	18
Ontario	31	22
<b>Write letters or other text of more than one page at least once a month</b>		
Canada	41	26
New Brunswick	31	21
Quebec	--	26
Ontario	41	31
<b>Read books at least once a week</b>		
Canada	56	40
New Brunswick	55	36
Quebec	--	38
Ontario	56	53
<b>Spend more than two hours per day watching television or videos</b>		
Canada	38	51
New Brunswick	42	41
Quebec	--	53
Ontario	38	42
<b>Children should have time set aside each day to read</b>		
Canada	53	39
New Brunswick	48	37
Quebec	--	36
Ontario	50	53

-- Amount too small to be expressed.

Source: Statistics Canada, International Adult Literacy Survey, 1994.

### Summary

In general, the differences in literacy levels between anglophones and francophones in Canada are not related to language. Rather, the literacy gap arises largely from the educational advantage that anglophones historically have had, and this source of inequality is disappearing as the educational attainment of the francophone population increases. Although age is closely related to education, it is an important explanatory factor in its own right, and being younger than 45 is strongly associated with higher literacy levels. Making a habit of reading every day also contributes significantly to high-level literacy skills, and people who read during their leisure time score higher on literacy tests, whether their mother tongue is French or English.



**Jean-Pierre Corbeil** is an analyst with Demography Division, Statistics Canada.



## Jobs for computer programmers double in 5 years

Between 1992 and 1997, jobs for computer programmers and systems analysts increased by 92% to 267,000. This compares with a 9% employment growth in the economy as a whole over the same period. Rapid growth of the Internet, the spread of internal computer networks in large organizations, and tackling the Year 2000 problem have all contributed to this expanding job market. Programmers worked an average of 38.8 hours a week in 1997, about an hour less than in 1992. They were no more likely than others to work overtime or to hold a second job. In late 1997, computer programmers and systems analysts earned, on average, about \$300 more per week than workers overall (\$853 versus \$577).

### Perspectives on labour and income

Summer 1998, Vol. 10, no. 2  
Statistics Canada,  
Catalogue no. 75-001-XPE



## Majority of violent crimes committed by people known to victim

In the majority of violent crimes reported to police, the victim usually knows the assailant. In 1996, one out of three victims was victimized by a stranger. In addition, violence committed by strangers was less likely to result in a physical injury: 41% of incidents involving total strangers

resulted in either major or minor injuries, compared with 52% where the victim knew the perpetrator. The major exception to this pattern was robbery, where 83% of the victims did not know the perpetrator. Most violent crimes tend to occur in the home, perpetrated by someone known to the victim.

### Juristat

Vol. 18, no. 9  
Statistics Canada,  
Catalogue no. 85-002-XPE



## Fees up, registrations down for continuing education courses

Registrations in non-credit, university-level courses have declined 7% from 350,000 in 1995/96 to 327,000 in 1996/97. During the same period, the average tuition fee for a non-credit course increased 13% to \$360. Professional development continues to be the main reason for enrolling in non-credit courses: 71% of applicants registered for professional development courses, while the remaining 29% registered for general interest and academic courses. Social sciences were the most popular field of study, accounting for 24% of continuing education registrations, followed by general interest courses (16%), health professions and occupations (15%), and the humanities (14%). The traditional classroom setting remains the most common medium of instruction.

### Continuing Education Survey

Statistics Canada,  
Culture, Tourism and the Centre  
for Education Statistics



## Almost one-third of households talking with computers

In October 1997, nearly 3 out of every 10 households had at least one member who typically used a computer every month at home, work or another location to send e-mail, do electronic banking or surf the Internet. Alberta had the highest percentage of households with members who used computers (35%) and Quebec, the lowest (20%). Communicating by computer was more prevalent in households with young people. Some 38% of households with people under 18 used a computer regularly to communicate, compared with 25% of households in which there was no one under 18. Of households that used computers regularly to communicate, 84% reported using it to search for specific information on the Internet, 83% said they used computers for e-mail, and about one-third communicated from home for employer-related business.

### Microdata file 56M0002XCB

Statistics Canada,  
Special Surveys Division



## More than half a million adults receive home care

Some 523,000 adults, or 2.4% of the population aged 18 and over, received publicly-funded home care services in 1994/95. The majority (64%) were seniors, who needed help with personal care or with

activities such as preparing meals, shopping and housework. People who suffered from cancer or the effects of stroke had about twice the odds of receiving home care as did people without these conditions. Half of all home care recipients reported poor or fair health. About 28% of people who received home care had been hospitalized for eight nights or longer in 1993/94, compared with just 2% of other adults.

### Health Reports

Summer 1998, Vol. 10, no. 1  
Statistics Canada,  
Catalogue 82-003-XPB



## Number of seniors will triple over next 40 years

Births in Canada declined for a sixth consecutive year in 1996. If, as anticipated, this trend will stay on course, by the year 2020 Canada's natural population growth (births minus deaths) will approach zero. Immigration, in the meantime, is accounting for a larger and larger share of population growth (53% in 1996). Meanwhile, Canada's population continues to get older. By 2030, persons aged 65 and over will represent 23% of the Canadian population. In the 1990s, seniors tend to live independently of their children, but the lives of men and women are quite different. Half of women aged 75 and over live alone, compared with only 20% of men. Elderly persons with very low incomes tend to live in large households.

### Report on the Demographic Situation in Canada 1997

Statistics Canada,  
Catalogue no. 91-209-XPE



# Canada's Aboriginal Languages

**By Mary Jane Norris**

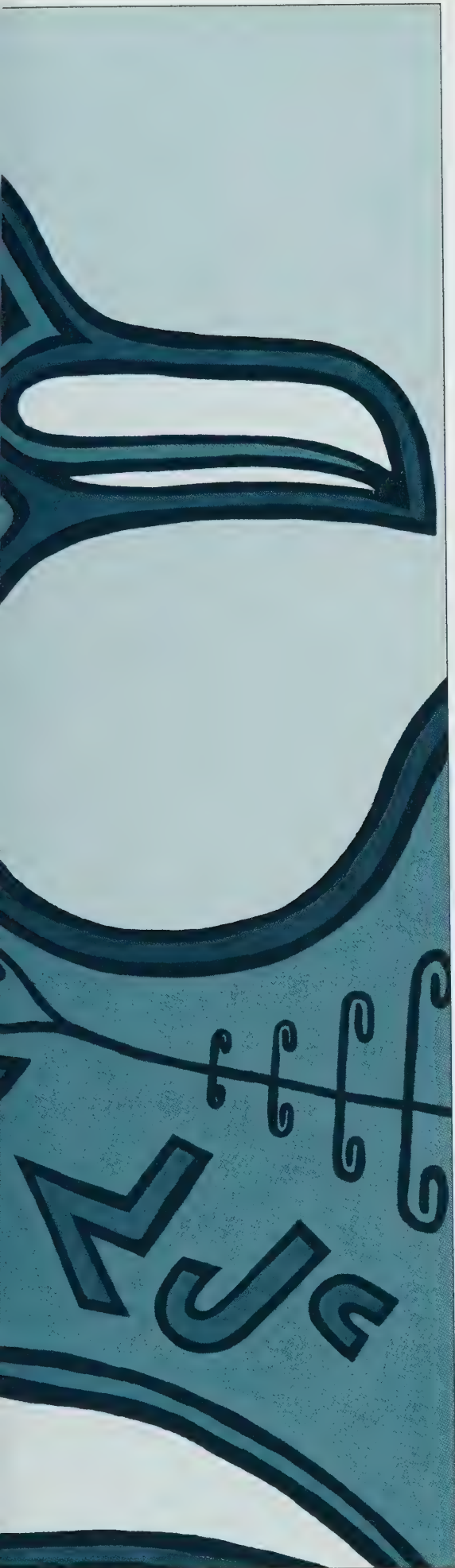
Canada's Aboriginal languages are many and diverse, and their importance to indigenous people immense. Language is one of the most tangible symbols of culture and group identity. It is not only a means of communication, but a link which connects people with their past and grounds their social, emotional and spiritual vitality. Although loss of language doesn't necessarily lead to the death of a culture, it can severely handicap transmission of that culture. For Aboriginal people, great losses have already occurred. During the past 100 years or more, nearly ten once flourishing languages have become extinct; at least a dozen are on the brink of extinction. When these languages vanish, they take with them unique ways of looking at the world, explaining the unknown and making sense of life.

Societal factors often contribute to the decline of languages. Without doubt, the forces of dominant languages and modernization exert a strong influence on any minority language. In the case of Aboriginal languages, historical events such as the prohibition of indigenous language use in residential schools have also contributed to this process. In addition, the fact that most Aboriginal languages were predominantly oral may also have diminished, in an already difficult environment, their chances of survival.

As of 1996, only 3 out of Canada's 50 Aboriginal languages had large enough populations to be considered truly secure from the threat of extinction in the long-run. This is not surprising in light of the fact that only a small proportion of the Aboriginal population speaks an Aboriginal language. Of some 800,000 persons who claimed an Aboriginal identity in 1996, only 26% said an Aboriginal language was their mother tongue and even fewer spoke it at home. This article explores which of Canada's Aboriginal languages are flourishing and which are in danger of disappearing. It also examines the factors that differentiate viable languages from endangered ones. And finally, it compares language use and maintenance patterns between 1981 and 1996 to understand what happened to Aboriginal languages over the years and what the future may hold for them.







### Some languages large, others tiny

The current 50 languages of Canada's indigenous peoples belong to 11 major language families — 10 First Nations and Inuktitut. Most families consist of separate but related member languages, and each member language may include several dialects. Exceptions comprise the Haida, Tlingit and Kutenai families — known as the isolates — which cannot be further broken down into individual languages.

Some language families are large and strong, others small and vulnerable. The three largest families, which together represent 93% of persons with an Aboriginal mother tongue, are Algonquian (with 147,000 people

whose mother tongue is Algonquian), Inuktitut (with 28,000) and Athapaskan (with 20,000). The other eight account for the remaining 7%, an indication of their relative size. Tlingit, one of the smallest families, has a mere 145 people in Canada whose mother tongue is that language. Similar variations apply to individual languages — Cree, with a mother tongue population of 88,000, appears immense when compared with Malecite, at 660.

### Geography influences size and diversity of languages

Geography is an important contributor to the diversity, size and distribution of Aboriginal languages

## CST Language classification: "viable" and "endangered"

This article's classification of language survival is based on M. Dale Kinkade's 1991 study, "The Decline of Native Languages in Canada." Other classification schemes exist, but there is general agreement as to which languages are viable and which endangered. Kinkade divides Aboriginal languages into five groups: already extinct, near extinction, endangered, viable but with a small population base, and viable with a large population.

- Languages near extinction are considered to be beyond the possibility of revival, since generally only a few elderly people know them. (These languages are not discussed in this study because reliable Census data are not available.)
- Languages considered endangered are still spoken by enough people to make survival an outside possibility, given sufficient community interest and educational programs.
- Languages that are viable but small tend to have more than 1,000 speakers and are spoken in isolated or well-organized communities with strong self-awareness. In these communities, language is considered one of the important marks of identity.
- Viable languages have large enough population bases that long-term survival is relatively assured. In this article, the terms "healthy", "strong" and "flourishing" are used alternatively to describe viable languages.

For discussions on viable and endangered Aboriginal languages see UNESCO. 1996. *Atlas of the World's Languages in Danger of Disappearing*. Edited by Stephen A. Wurm. Paris: Unesco Publishing; Report of the Royal Commission on Aboriginal Peoples. 1996. *Gathering Strength*. Vol. 3. Ottawa: Minister of Supply and Services Canada; Indian and Northern Affairs Canada. 1990. *Indians and Inuit of Canada*. Ottawa: Minister of Supply and Services Canada.



across Canada's regions. Open plains and hilly woodlands, for example, are ideal for accommodating large groups of people. Because of the terrain, groups in these locations can travel and communicate with each other relatively easily and often tend to spread over larger areas. On the other hand, soaring mountains and deep gorges tend to restrict settlements to small pockets of isolated groups. British Columbia's mountainous landscape with its numerous physical barriers was likely an important factor in the evolution of the province's many separate, now mostly small, languages. Divided by terrain, languages such as Salish, Tsimshian, Wakashan, Haida, Tlingit and Kutenai could not develop as large a population base as the widely dispersed Algonquian (particularly Cree and Ojibway) and Athapaskan languages, whose homes

are the more open central plains and eastern woodlands.

In some instances, geography can also influence the likelihood of a language's survival. Groups located in relatively isolated regions, away from the dominant culture, face fewer pressures to abandon their language. They tend to use their own language in schooling, broadcasting and other communication services and, as a result, are likely to stay more self-sufficient. Communities living in the northern regions of Quebec, Nunavut, the Northwest Territories and Labrador — the Inuit, Attikamek and Montagnais-Naskapi — are examples of such groups.

Because of their large, widely dispersed populations, the Algonquian languages account for the highest share of Aboriginal languages in all provinces except British Columbia and the territories, ranging from 72%

in Newfoundland to practically 100% in the other Atlantic provinces. In both British Columbia and the Yukon, the Athapaskan languages make up the largest share (26% and 80% respectively), while Inuktitut is the most prominent language in the Northwest Territories (77%) and practically the only one in Nunavut (virtually 100%). British Columbia, home to about half of all individual languages, is the most diverse in Aboriginal language composition. However, because of the small size of these language groups, the province accounts for only 7% of people with an Aboriginal mother tongue.

### Large languages more likely to flourish

There are a number of factors which contribute to a language's ability to survive. First and foremost is the size of the population with an Aboriginal mother tongue or home language. Since a large base of speakers is essential to ensure long-term viability, the more speakers a language has, the better its chances of survival.

Indeed, Inuktitut, Cree and Ojibway — the three most flourishing languages — all boast over 20,000 people with an Aboriginal mother tongue. In contrast, endangered languages rarely have more than a few thousand speakers; often they have only a few hundred. For instance, the two smallest and weakest language groups, Kutenai and Tlingit, have mother tongue populations of 120 and 145 respectively.

### Passing on language critical for survival

To survive, a language must be passed on from one generation to the next. The most effective way of making this happen is to speak it in the home where children will learn it as their mother tongue. Spoken in the home, language is used as the working tool of everyday life. In contrast, when learned as a second language, it is often used in potentially limited situations only as

## CST Language indicators

**Mother tongue population (MT):** those people whose first language learned at home, and still understood, is an Aboriginal language.

**Home language population (HL):** those people whose language spoken most often at home is an Aboriginal language.

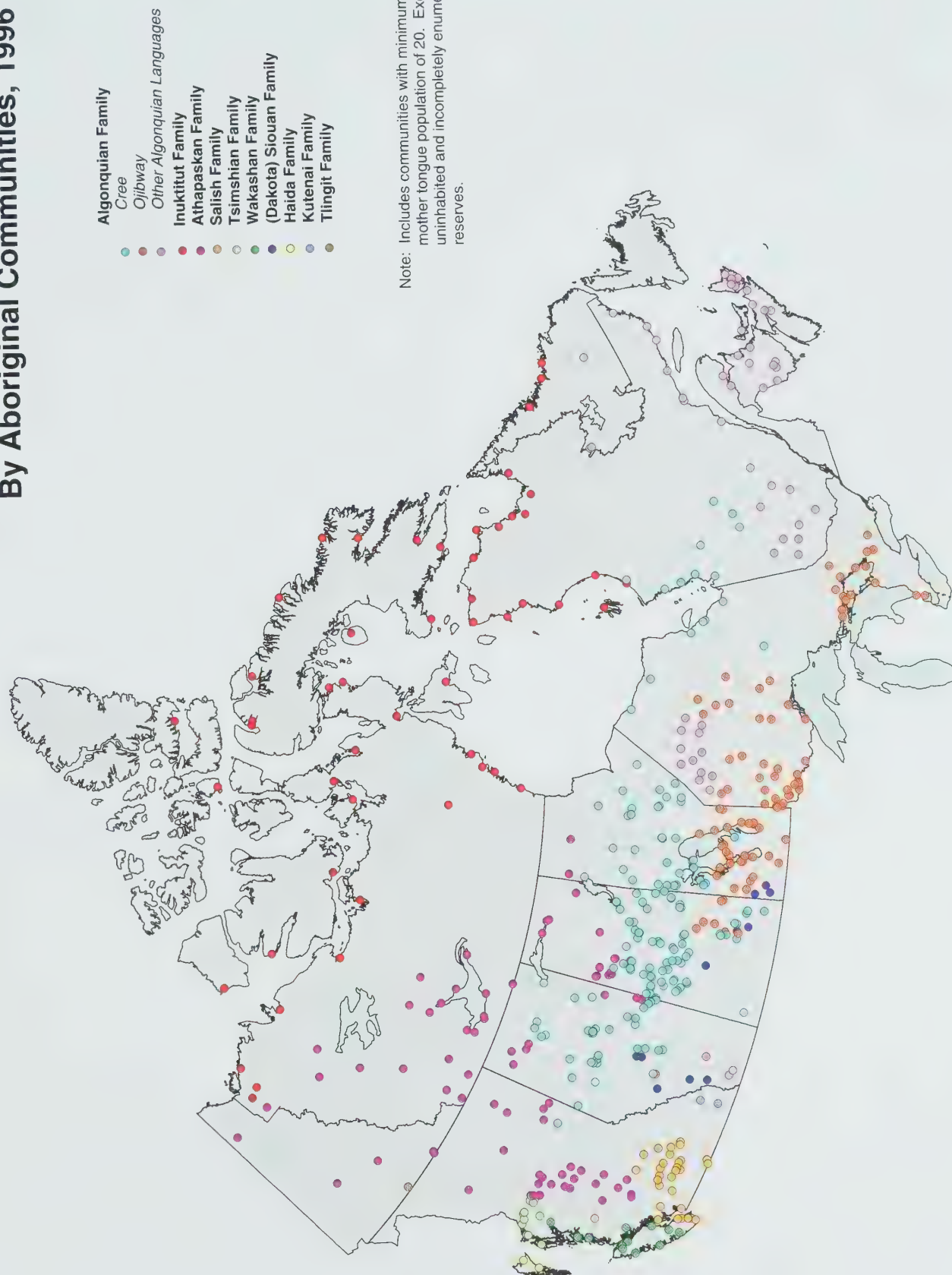
**Knowledge or ability population (Kn):** those people who speak an Aboriginal language well enough to conduct a conversation.

**Index of continuity (HL/MT):** measures language continuity, or vitality, by comparing the number of those who speak a given language at home to the number of those who learned that language as their mother tongue. A ratio less than 100 indicates some decline in the strength of the language (i.e., for every 100 people with an Aboriginal mother tongue, there are fewer than 100 in the overall population who use it at home). The lower the score, the greater the decline or erosion.

**Index of ability (Kn/MT)<sup>1</sup>:** compares the number of people who report being able to speak the language with the number who have that Aboriginal language as a mother tongue. If for every 100 people with a specific Aboriginal mother tongue, more than 100 persons in the overall population are able to speak that language, some clearly learned it as a second language either in school or later in life. This may suggest some degree of language revival.

1. Harrison, B. 1997. "Language integration: Results of an intergenerational analysis." *Statistical Journal of the United Nations* ECE. 14: 289-303.

# DISTRIBUTION OF ABORIGINAL LANGUAGES By Aboriginal Communities, 1996



Source: Statistics Canada, Census of Population, 1996.  
Produced by the Geography Division: Statistics Canada, 1998.



may be the case, for example, in immersion programs. There is, therefore, no equivalent to learning a language as a mother tongue.<sup>1</sup> Because unlike other minority language groups, Aboriginals cannot rely on new immigrants to maintain or increase their population of speakers, passing on the language from parents to children is critical for all indigenous languages' survival.<sup>2</sup>

### Language vitality declines between 1981 and 1996

Between 1981 and 1996, the index of continuity has declined for all Aboriginal languages. Although the number of people reporting an Aboriginal mother tongue increased by nearly 24% between 1981 and 1996,<sup>3</sup> the number of those who spoke an Aboriginal language at home grew by only 6%. As a result, for every 100 people with an Aboriginal mother tongue, the number who used an indigenous language most often at home declined from 76 to 65 between 1981 and 1996.

Although most languages experienced a steady erosion in linguistic vitality during these years, endangered ones suffered the most. For example, the index of continuity for Salish languages fell from 35 in 1981 to only 12 by 1996. Tlingit and Kutenai, as

languages most often spoken at home, had practically disappeared by the 1990s. Given that in 1996 there were only 120 people with a Kutenai mother tongue, it is not hard to see why there is serious concern for the survival of this language. In contrast, although the continuity index dipped for the relatively strong Cree as well, it did so by considerably less, from 78 to 65. Although Inuktitut did experience a slight erosion in the early 1980s, the past decade has seen the index stabilize at 84.

By 1996, these rates of language erosion resulted in strikingly different continuity levels for viable and endangered languages as a whole. For every 100 speakers with an Aboriginal mother tongue, an average of about 70 used an indigenous home language among viable groups, compared with 30 or fewer among endangered groups.

### The younger the speakers, the healthier the language

Age also plays an important role in how healthy languages are and what the future may hold for them. The average age of those who speak an Aboriginal language or have it for a mother tongue

reveals the extent to which language transmission has been successful. The higher the average age, the fewer young people have learned or still understand the language and the older the people who still speak it. When these older people die, so may the languages.

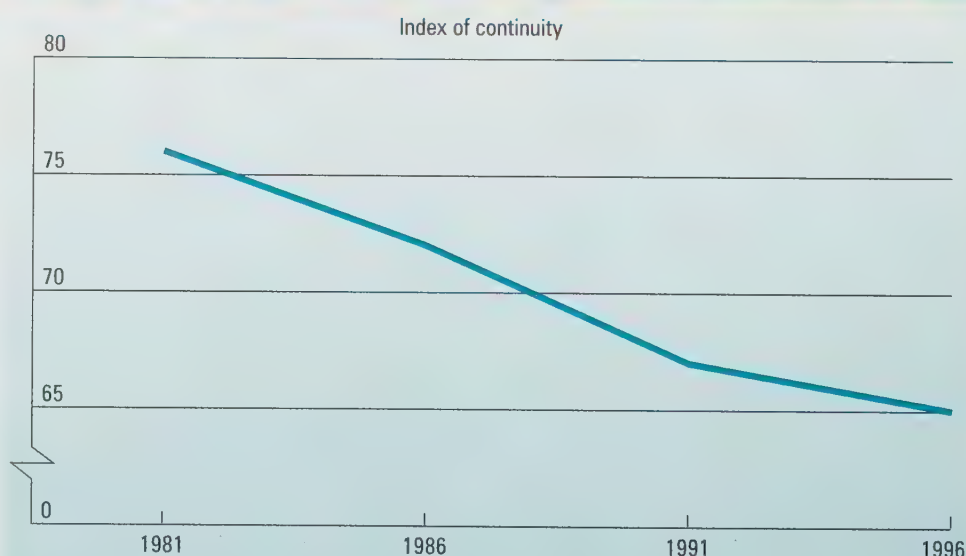
For indigenous language groups as a whole, average ages are getting higher. Two main factors are responsible for this trend. First, although fertility rates are still high they are declining, translating into relatively fewer children. And second, the proportion of the Aboriginal population with an indigenous mother tongue is decreasing with younger generations. In fact, in 1996 only 20% of children under 5 had an indigenous mother tongue.<sup>4</sup> Overall, between 1981 and 1996, the average age of the population with an Aboriginal mother tongue rose by 3 years, to reach 31 years in 1996. Similarly — although to a lesser extent — the average age of Aboriginal home language speakers increased by nearly 2 years, to 27 years in 1996.

4. In comparison, 60% of those 85 years and over, and 30% of 40- to 44-year-olds reported an Aboriginal mother tongue in 1996.

1. Some 75% of those who have learned the language at home are fair to excellent speakers, compared with 23% of those who have learned it at school only. Yukon Executive Council Office. 1991. *A profile of Aboriginal languages in the Yukon*.
2. For example, immigration spurred the growth of the Chinese mother tongue group from 95,000 in 1971 to 517,000 in 1991. B. R. Harrison. 1997. "Language integration: Results of an intergenerational analysis." *Statistical Journal of the United Nations ECE* 14: 292.
3. The growth in Aboriginal mother tongue populations is attributed to the high fertility rates of the Aboriginal population. To a lesser extent, adults relearning their mother tongue and more people reporting their Aboriginal mother tongue may also have contributed to the growth.

**CST**

The index of continuity for Aboriginal languages has declined steadily over the past 15 years



Source: Statistics Canada, Censuses of Population.

Aboriginal Languages	Mother Tongue Populations	Index of Continuity	Index of Ability	Average Age of Population		Home Language	Status of Language**
				Knowledge	Mother Tongue		
<b>Total</b>	<b>208,610</b>	<b>70</b>	<b>117</b>	<b>30.4</b>	<b>31.0</b>	<b>28.3</b>	<b>mix of viable and endangered</b>
<b>Algonquian Family</b>	<b>146,635</b>	<b>70</b>	<b>117</b>	<b>30.5</b>	<b>30.9</b>	<b>28.8</b>	<b>mostly viable</b>
Cree	87,555	72	117	29.9	30.2	27.9	viable large
Ojibway	25,885	55	122	34.9	36.2	34.4	viable large
Montagnais-Naskapi	9,070	94	104	25.1	25.2	24.8	viable small
Micmac	7,310	72	111	29.5	29.9	29.2	viable small
Ojji – Cree	5,400	80	114	25.7	26.3	26.8	viable small
Attikamek	3,995	97	103	21.8	21.9	21.5	viable small
Blackfoot	4,145	61	135	36.4	39.7	40.6	viable small
Algonquin	2,275	58	119	29.8	30.7	31.4	viable small
Malecite	655	37	148	40.5	44.0	44.8	viable small
Algonquian*	350	40	159	47.2	52.2	46.7	uncertain
<b>Inuktitut Family</b>	<b>27,780</b>	<b>86</b>	<b>109</b>	<b>23.9</b>	<b>23.9</b>	<b>23.3</b>	<b>viable large</b>
<b>Athapaskan Family</b>	<b>20,090</b>	<b>68</b>	<b>117</b>	<b>31.4</b>	<b>32.5</b>	<b>30.0</b>	<b>mostly viable</b>
Dene	9,000	86	107	24.4	24.8	24.1	viable small
South Slave	2,620	55	124	35.6	37.8	38.4	viable small
Dogrib	2,085	72	118	28.3	29.8	30.6	viable small
Carrier	2,190	51	130	37.5	41.4	40.5	viable small
Chipewyan	1,455	44	128	39.4	40.2	40.7	viable small
Athapaskan	1,310	37	129	41.6	44.7	44.2	uncertain
Chilcotin	705	65	130	32.2	37.0	36.9	viable small
Kutchin-Gwich'in (Loucheux)	430	24	114	53.0	53.1	56.8	endangered
North Slave (Hare)	290	60	116	38.3	39.1	39.8	endangered
<b>(Dakota)Siouan Family</b>	<b>4,295</b>	<b>67</b>	<b>111</b>	<b>31.0</b>	<b>31.9</b>	<b>28.0</b>	<b>viable small</b>
<b>Salish Family</b>	<b>3,200</b>	<b>25</b>	<b>132</b>	<b>42.0</b>	<b>48.7</b>	<b>47.2</b>	<b>endangered</b>
Salish	1,850	24	130	43.0	49.7	48.5	endangered
Shuswap	745	25	134	38.7	46.3	42.9	endangered
Thompson	595	31	135	43.1	48.6	48.3	endangered
<b>Tsimshian Family</b>	<b>2,460</b>	<b>31</b>	<b>132</b>	<b>43.2</b>	<b>48.0</b>	<b>49.6</b>	<b>endangered</b>
Gitksan	1,200	39	123	41.4	45.2	45.7	viable small
Nishga	795	23	146	41.8	47.5	57.6	endangered
Tsimshian	465	24	132	50.5	55.9	52.7	endangered
<b>Wakashan Family</b>	<b>1,650</b>	<b>27</b>	<b>118</b>	<b>47.3</b>	<b>51.3</b>	<b>51.1</b>	<b>endangered</b>
Wakashan	1,070	24	129	47.7	53.0	53.2	endangered
Nootka	590	31	99	46.5	48.1	48.4	endangered
<b>Iroquoian Family***</b>	<b>590</b>	<b>13</b>	<b>160</b>	<b>36.4</b>	<b>46.5</b>	<b>52.0</b>	<b>uncertain</b>
Mohawk	350	10	184	36.6	46.1	60.5	uncertain
Iroquoian	235	13	128	35.8	47.0	41.4	uncertain
<b>Haida Family</b>	<b>240</b>	<b>6</b>	<b>144</b>	<b>46.7</b>	<b>50.4</b>	<b>64.6</b>	<b>endangered</b>
<b>Tlingit Family</b>	<b>145</b>	<b>21</b>	<b>128</b>	<b>45.5</b>	<b>49.3</b>	<b>41.6</b>	<b>endangered</b>
<b>Kutenai Family</b>	<b>120</b>	<b>17</b>	<b>200</b>	<b>37.1</b>	<b>52.3</b>	<b>41.2</b>	<b>endangered</b>
<b>Aboriginal languages*</b>	<b>1,405</b>	<b>28</b>	<b>176</b>	<b>43.0</b>	<b>47.0</b>	<b>45.8</b>	<b>endangered</b>

Note: All indicators based on single and multiple responses combined.

\* Not identified elsewhere.

\*\* The viability "status" of the individual languages is based on a classification from M. Dale Kinkade's "The Decline of Native Languages in Canada" in *Endangered Languages*, edited by R.H. Robins and E.M. Uhlenbeck., Berg Publishers Limited, 1991.

\*\*\*Data for the Iroquoian family is not particularly representative due to incomplete enumeration of reserves. Other languages may also be affected by incomplete enumeration.

Source: Statistics Canada, Census of Population, 1996.



Average ages and rates of population aging do, however, vary by languages. Not only do viable languages have younger populations, but the average age of these groups rises more slowly than that of endangered groups. For example, the average age of the Inuktitut mother tongue population — young by any standard — increased only slightly from 23 to 24 years between 1981 and 1996. The rise was somewhat higher, but still relatively modest for the Cree, from 26 to 30. In comparison, the average age of the much older Kutenai mother tongue group increased from 44 in 1981 to 52 in 1996; for the Tlingit, from 47 to 58. The pattern, then, repeats: as with language erosion, population aging affects endangered languages more, thus accelerating their slide towards extinction.

### Language loss most pronounced during family formation years

Examining the rate at which a specific group of people shifts from one language to another provides a way of

understanding language use and decline in relation to lifestyle changes. Language maintenance seems very much to depend on the stage of life people are going through.

Young children, for example, have not yet had time or reason to shift from their mother tongue to another language and for most of them their mother tongue is, therefore, the same as their home language. As a result, for

*Loss of an Aboriginal home language is most pronounced in the working-age population, especially among women.*

every 100 children who were under 5 in 1981, 91 spoke their mother tongue at home. However, in 1996, when these children were in their mid- to late teens, only 76 still used their mother tongue as their home language. While this indicates a serious loss in home language usage, the decline does not stop here.

As youth move out of the original family home, marriage, entry into the labour force, and a different, often

large, urban environment can further accelerate their language decline. Without the support of a closely knit community, and immersed in the language and culture of the dominant society, language erosion becomes difficult to resist. Indeed, the data show that language loss is most pronounced during the labour force years. While this holds for both men and women, it is particularly notable for

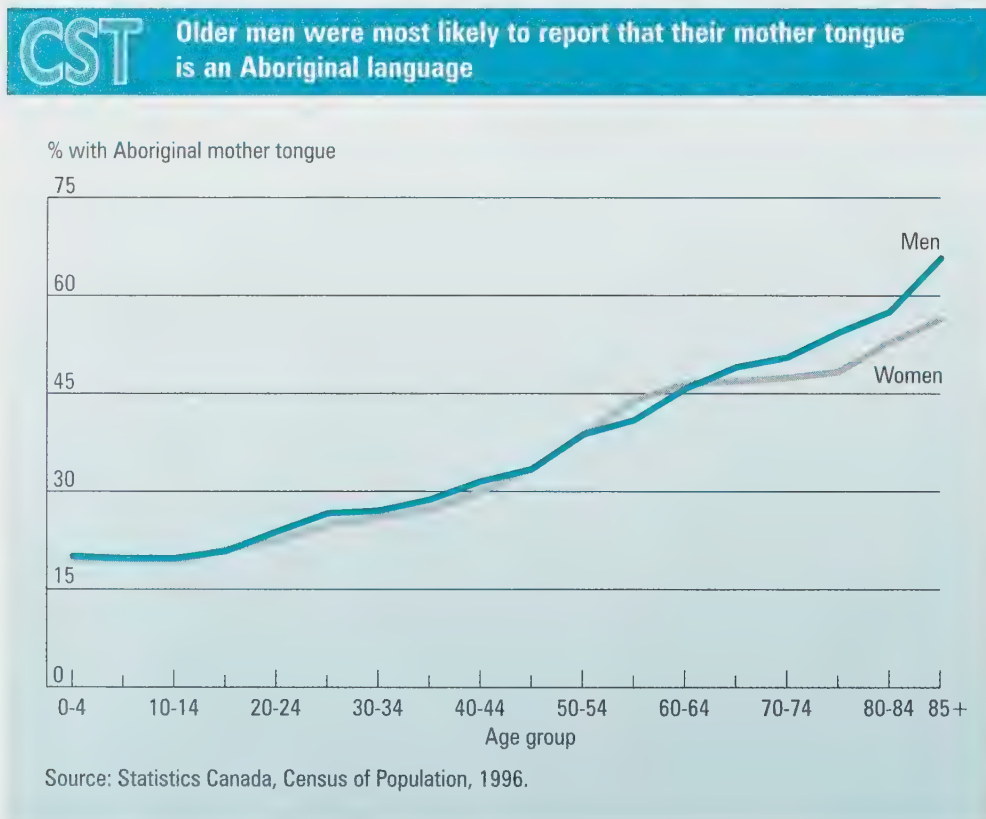
women. Why this should be so is not clear, but contributing factors may include the fact that women are more likely than men to leave their reserves and move to other locations where the chances of marrying non-Aboriginals are higher.

Indeed, the index of continuity declines from 74 for women between the ages of 20 and 24 to 45 by the time these women reach the ages of 35 to 39. Because these are the very years during which women tend to bring up young children, their shift from an Aboriginal to another home language is all the more serious for the transmission of these indigenous languages.

With the older cohorts nearing the end of their working lives and moving into their retirement years, the loss in home language is less pronounced. Their language use still declines, but more slowly than before. For example, language continuity for the cohort aged 50 to 54 in 1981 declines from a ratio of about 64 in 1981 to 61 by 1996. A similarly slow erosion occurs among the older seniors.

### Registered Indians account for majority of Aboriginal speakers

Groups that live in remote communities or in settlements with concentrated populations of indigenous speakers appear to find it easier to retain their language. Indeed, two such groups, on-reserve Registered Indians and the Inuit, show the highest indexes of language continuity among all groups: 80 and 85, respectively.<sup>5</sup> In contrast, non-status Indians and Métis,



who tend to live off-reserve, as well as off-reserve Registered Indians, have home language-mother tongue ratios of 58, 50 and 40 respectively, pointing to a more pronounced state of language decline. Clearly, the off-reserve environment poses major threats to Aboriginal languages.

### Signs of hope for endangered languages

Despite the grim prospects facing many small languages, there are some signs which give rise to hope. The Kutenai language family, for example, has the

smallest mother tongue population, one of the lowest indexes of continuity and some of the oldest populations. However, for every person with a Kutenai mother tongue, there are two people (generally younger) who are able to speak it, suggesting that younger generations may be more likely to learn Kutenai as a second language than as a mother tongue. Similar second-language patterns are showing up for other endangered languages. A growing awareness of Aboriginal cultural identity may be partly responsible for this resurgence in language.<sup>6</sup>

Other positive signs are also apparent. According to the 1991 Aboriginal Peoples' Survey, about 9 in 10 adults would like to relearn an Aboriginal language they once spoke. In addition, the great majority of adults who never

spoke an Aboriginal language reported that they would like to learn one.<sup>7</sup>

### Summary

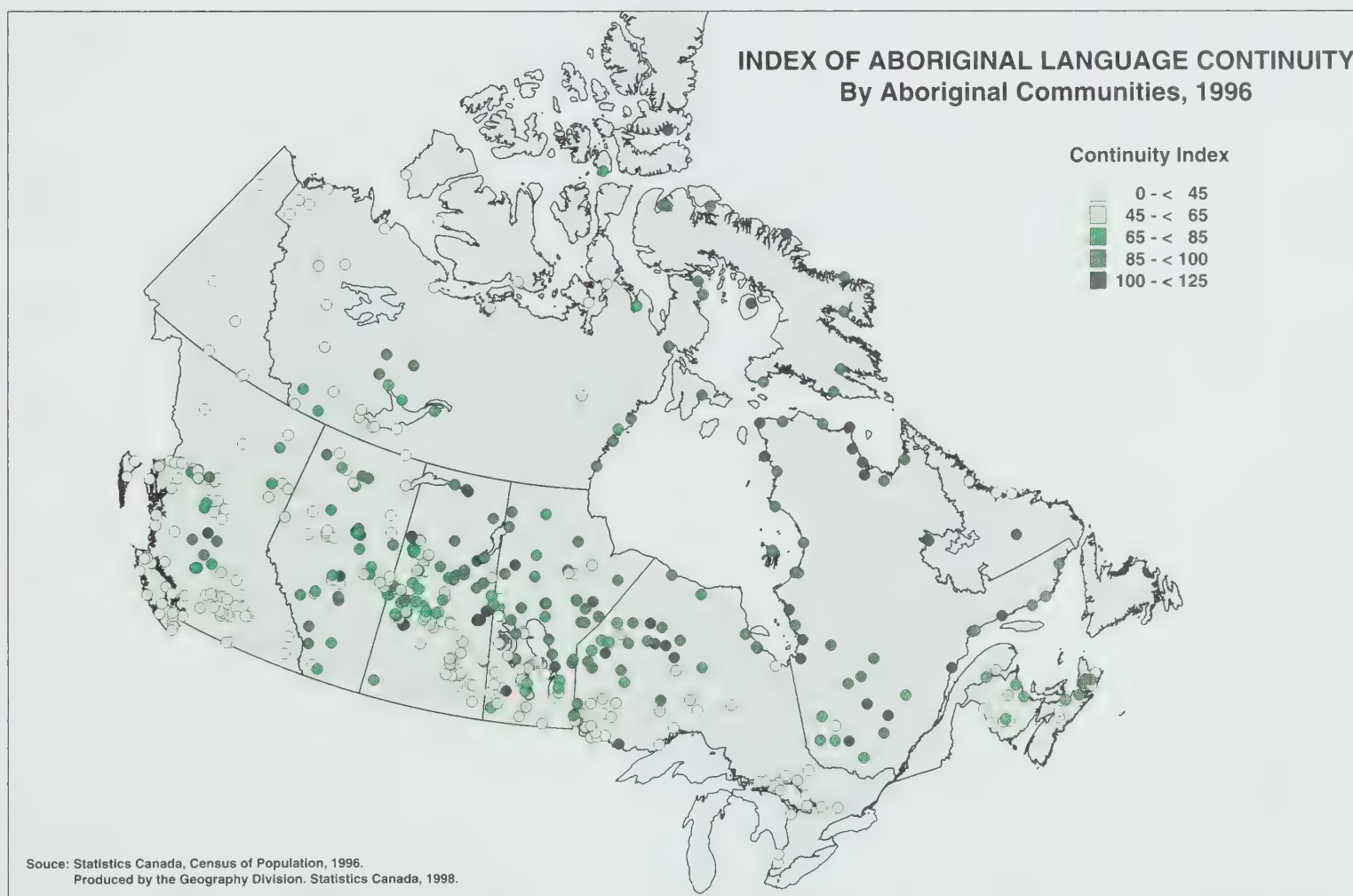
Canada's Aboriginal languages are among the most endangered in the world.<sup>8</sup> Significant numbers of languages have either already disappeared or are close to extinction, and among

5. However, significant variations exist between Inuit communities depending on location. While the Eastern group of dialects have high indexes of continuity, the Western groups have much lower ones.

6. For example, the off-reserve Aboriginal Head Start Program, designed primarily for pre-schoolers, incorporates language as one of its components.

7. Ponting, J. R. 1997. *First Nations in Canada – Perspectives on Opportunity, Empowerment and Self-determination*. Toronto: McGraw-Hill Ryerson.

8. UNESCO. 1996. *Atlas of the World's Languages in Danger of Disappearing*. Edited by Stephen A. Wurm. Paris: Unesco Publishing, p. 23.





This article uses data from the 1981 to 1996 censuses as well as the 1991 Aboriginal Peoples Survey (APS). Because of changes in concepts and measures of the Aboriginal population over time, the time-series analysis from the Census is restricted to language-based data only, such that Aboriginal language data are reported for the total population.

The Aboriginal identity population includes those people who reported identifying with at least one Aboriginal group, i.e., North American Indian, Métis or Inuit in 1996. In 1991 and in previous censuses, a person's Aboriginal ethnicity was determined using the ethnic origin question based primarily on ancestry.

To ensure comparability over time, this study controlled for incomplete enumeration of reserves between 1981 and 1996, and recoding of languages in the 1986, 1991 and 1996 censuses to correspond to the 1981 classifications. Prior to 1981, detailed data on individual Aboriginal languages were not available — the only distinctions made were between Indian and Eskimo (Inuit). While the level of detail in terms of individual languages generally increased with each census, some of the smaller languages, coded separately in earlier censuses, were collapsed into broader groupings because of declining numbers.

- **Single response:** occurs when the respondent reports one language only as his or her mother tongue or home language. In this article, time series data (1981-1996) are based on single responses since multiple responses were not available until 1986.
- **Multiple response:** occurs when the respondent reports more than one language that he or she uses equally often as mother tongue or home language. Data for 1996 are based on single and multiple responses combined. Multiple responses account for 10% of mother tongue and 17% of home language responses.

those spoken today, only 3 of some 50 are viable with a large population base. Large or small, viable languages tend to have relatively young speakers, are successfully passed on between generations, and are spoken in isolated or well-organized communities. In contrast, endangered languages are characterized by small population groups, older speakers, and lower rates of language transmission.

Aboriginal elders, teachers and other leaders are well aware of the gravity of

the linguistic situation and are taking steps to preserve indigenous languages. These include such measures as language instruction programs, Aboriginal media programming, and the recording of elders' stories, songs, and accounts of history in the Aboriginal language.<sup>9</sup> Perhaps as a result, the number of people who can speak and understand an Aboriginal language has been on the rise.

9. Ponting, *op.cit.*, p. 252.

The Royal Commission on Aboriginal Peoples (RCAP) has studied Aboriginal language use and retention extensively. Its recommendations aimed at saving these languages from extinction echo some of the steps taken by Aboriginal elders. In addition, RCAP also recommends granting special status to Aboriginal languages and guaranteeing their extended use in the public domain, at least within the confines of Aboriginal communities; providing formal education in the Aboriginal language; and conducting research on these languages. The Commission emphasizes that everyday language use in the home and in the community is critical for intergenerational transmission and for acquiring Aboriginal languages as a mother tongue.



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# Skill Deficits Among The Young

by Sid Gilbert and Jeff Frank

**A**dvancing technology has made adaptability a key component of success in the workplace. And while young people need the technical knowledge provided by an education to succeed in the job market, generic skills are also highly valued by employers. Some of these skills, such as literacy and numeracy, are formally taught by the education system. Others are acquired through experience and upbringing, including oral and written communication; thinking skills such as creativity, critical thinking and problem-solving; and "soft skills" such as interpersonal abilities, learning and team work.

These generic skills are maintained and improved with practice, and young people who rarely use them may face a more difficult transition from school to work. Indeed, they may also be vulnerable over the long-term, since having weaker generic abilities may make it harder to adapt to the changing requirements of the job market. This article focuses on the key factors associated with infrequent use of basic skills, and then examines the role of educational attainment in the application of these skills.

## CST What you should know about this study

Conducted by Statistics Canada on behalf of Human Resources Development Canada, the 1995 School Leavers Follow-up Survey (SLF) continued an ongoing survey of young people's lives as they finish their education and enter the workforce. The first survey, the 1991 School Leavers Survey (SLS), was designed to determine high school leaving rates ("drop-out" rates), and to compare young people who had successfully completed high school (graduates) with those who were still attending (continuers) and those who had left school before graduating (leavers). The SLS collected information from almost 9,500 young people aged 18 to 20 living in private dwellings in the ten provinces.

In 1995, the SLF revisited over 6,000 of the original respondents, now aged 22 to 24, to focus on school-to-work transitions of young adults by gathering information on education and work activities beyond high school. This article examines the generic skills respondents possessed, as measured by the frequency with which they performed these skills activities. Although this measure of skill use should not be interpreted as a direct indicator of proficiency, it is assumed that a skill performed frequently is less likely to be lost. Nevertheless, people may not use some of their skills because of the nature of their work, schooling or personal circumstances.

**Skill sets:** Skills were grouped into six categories, or sets: reading, writing, numeracy, communication, learning, and group or team work.

**Skill use:** Respondents were asked about the frequency with which they used the six basic skill sets during the 12 months preceding the survey. There was no restriction on the context in which these skills may have been used, allowing respondents to include activities at work, at school or in their personal life. For each of the six skill sets, respondents were asked four questions about the frequency with which they performed various skill-related activities. Responses ranged from never (least frequent) to more than three times a week (most frequent).

**Self-assessment of ability:** Respondents were asked to rate their abilities for each of the six skill activities on a scale of one to ten, that is, from very basic to very advanced.

**Odds ratios:** In this article odds ratios are used to assess whether, all other things being equal, people with a specific characteristic (say, employed) are more or less likely to report infrequent use of skills than a benchmark group of people (say, unemployed). An odds ratio close to 1.0 means there is little or no difference in skill use between the groups, but an odds ratio of 0.5 means the odds of low skill use are only half as high for the comparison group as for the benchmark group.



## What factors are associated with having insufficient skills?

Who is most likely to have a low level of skill use? Using a statistical technique called odds ratios, which examines the relationship between frequency of skill use and some key socio-economic characteristics, six skill sets were analyzed: reading, writing, numeracy, verbal communication, learning, and group or team work.

Three factors — education, employment and student status — were consistently related to the low use of all six skill sets. For example, infrequent use of skills was associated with relatively low levels of education. In contrast, having a job or attending college or university decreased the odds of reporting low skill use. These findings suggest that without appropriate environments conducive to using

their skills, some young people risk losing the generic skills they already have, or may fail to develop new ones.

Even though women are widely believed to have better developed “soft skills,” the analysis shows that after controlling for selected factors gender did not play an important role in low skill use. For instance, men are no more likely than women to report that they rarely read or use verbal



## Odds of rarely using basic skills are much higher for high school leavers

### Never or seldom used skills

	Reading	Writing	Numeracy	Verbal communication	Learning	Team work
<b>Education</b>						
School leaver	1.9	2.7	1.4	2.3	1.4	1.7
<i>Not school leaver</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>
<b>Employment status</b>						
Employed	1.1*	1.1*	0.7	0.6	0.8	0.6
<i>Not employed</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>
<b>Student status</b>						
Postsecondary student	0.4	0.4	0.8	0.8	0.7	0.8
<i>Not postsecondary student</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>
<b>Gender</b>						
Male	1.0*	1.3	0.4	1.0*	0.8	0.7
<i>Female</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>
<b>Family structure</b>						
Lone parent	1.0*	1.1*	1.0*	1.2	0.9	1.1
<i>Two parents</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>
<b>Socio-economic status<sup>1</sup></b>						
Lower	1.3	1.4	1.0*	1.2	1.1*	1.1*
<i>Higher</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>

Note: Benchmark group shown in italics. An odds ratio of close to 1.0 for the comparison group means there is little or no difference in skill use between the comparison and the benchmark groups, when the effects of other factors shown in the table are controlled for.

\* Not statistically significant.

1. Measured using mother's level of education as a proxy.

Source: Statistics Canada, School Leavers Follow-up Survey, 1995.

communication. On the other hand, they are considerably less likely than women to demonstrate low use of numeracy and teamwork skills.

Not unexpectedly, being a school leaver (not completed high school) was associated with low skill use, most notably in the areas of writing, reading and verbal communication. What seems more surprising, given conventional wisdom, is that after controlling for other factors, there were only very modest positive relationships between low skill use and living in a lone-parent family or a family with lower socio-economic status.

#### **But how important was education?**

The odds-ratio analysis shows that education is by far the most important predictor of a young person's skill use, but different patterns exist at different levels of education. Infrequent skill use was quite common among high school leavers, ranging from 55% for team work to 88% for verbal communication. As might be expected, high

*Low skill use is only modestly associated with living in a lone-parent family, or in a family with lower socio-economic status.*

school graduates had higher levels of skill use than school leavers. Even among these young people, though, skills were not used frequently: the proportion of graduates who never or seldom used skills ranged from 37% for reading to 73% for verbal communication skills. Interestingly, the skill-use patterns of graduates with high school only more closely resembled those of leavers than of graduates who went on to further education.

#### **How do youth rate their skills?**

When asked to rate their skills, there was some noticeable dissonance between self-assessment and frequency of skill use, especially among

## **CST Literacy skills "mismatch" in the Canadian workplace**

According to the 1994 International Adult Literacy Survey (IALS), about three-quarters of Canadian workers report there is a reasonable fit between their job requirements and their literacy skills (reading, writing and numeracy). Nevertheless, a significant number of people are a literacy "mismatch" with the work they do: one in five had higher level skills than were demanded by their job (literacy surplus), and as many as one in ten had insufficient skills to do their jobs adequately (literacy deficit).

Certain groups of workers are more likely to have a literacy surplus. Since the level of literacy among young Canadians is high, and yet many have difficulty finding satisfactory employment, it was not surprising that 16- to 24-year-olds were most likely (33%) to have a literacy surplus.

Among other factors, the extent of a worker's interaction with co-workers seems to influence literacy fit. Workers with limited or no supervisory responsibilities, the self-employed and those who worked part-time or in temporary jobs were more likely to find that their literacy skills were under-used. Jobs with these characteristics are often held by young people.

Having high literacy skills and not using them could have serious long-term consequences not only for individuals, but also for the overall level of human capital in the Canadian labour force. Analysis of the IALS data provides some support for the "use it or lose it" hypothesis, showing that under-using literacy skills in the workplace has a negative, if small, effect on literacy.

- For more information, see Harvey Krahn, and Graham Lowe, *Literacy Utilization in Canadian Workplaces*. Human Resources Development Canada, National Literacy Secretariat and Statistics Canada. Catalogue no. 89-552-MPE.



## Never or seldom used skills

	Reading	Writing	Numeracy	Verbal communication	Learning	Team work
				%		
High school leavers	58	82	58	88	64	55
High school graduates	37	58	51	73	55	41
no post-secondary education	56	77	58	80	61	48
with some postsecondary	41	65	51	75	58	43
with university degree	24	37	47	61	53	31
with other postsecondary completion	42	63	49	74	54	39
Postsecondary students	21	41	47	70	50	40

Source: Statistics Canada, School Leavers Follow-up Survey, 1995.

those with less education. The self-assessments were more positive than the frequency of skill use would indicate. Also, high school graduates with no further education were less likely than leavers to rate their skills as low, even though their skill use patterns were quite similar. University graduates and postsecondary students were least likely to view their skills as being only basic.

### Summary

Young people were most likely to use basic skills infrequently if they had less than high school completion. They were also more likely to rate their abilities as low-level. These findings suggest that in an increasingly well-educated society, which demands a wide array of formal and informal skills, young people without postsecondary training face, and know they face, a difficult transition from school to work.

In contrast, young people with postsecondary qualifications assessed their abilities highly, even though their use of basic skills was lower than might

be expected. This may indicate that although they possess the necessary skills, they are not yet employed in jobs that require them to exercise their abilities to the fullest extent. In other words, people in their 20s are still very much in the midst of maturing from students into workers.

- This article is adapted from *High School May Not Be Enough: An Analysis of Results from the School Leavers Follow-up Survey*. 1995. Human Resources Development Canada, Catalogue No. SP-105-05-98E and Statistics Canada, Catalogue No. 81-585-XPE.

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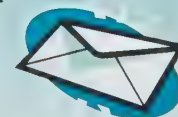
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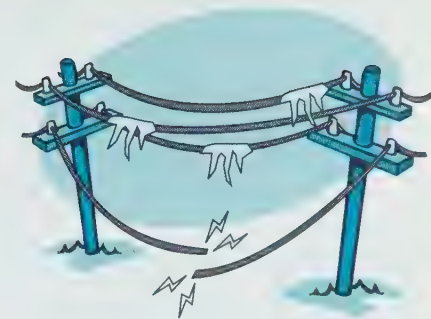
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# Ice Storm '98 !

by François Souldard, Doug Trant, Joe Filoso  
and Peter Van Wesenbeeck



From January 4 to 10, 1998, three successive storm fronts dropped as much as 100 millimetres of freezing rain on central and eastern Canada. At the height of the storm, the area covered by freezing precipitation stretched from Kitchener and Muskoka in southern Ontario to the Eastern Townships of Quebec and to the Fundy coasts of New Brunswick and Nova Scotia. In the United States, the storm hit parts of New England and northern New York state. This study concentrates on Canada's St. Lawrence River Valley where total precipitation exceeded 73 mm in Kingston, Ontario, 85 mm in Ottawa and 100 mm in areas south of Montreal. By comparison, the largest previously recorded ice storms left some 30 to 40 mm of ice.<sup>1</sup>



## DEALING WITH THE STORM

- Over 18% of Canada's population, including 56% of Quebec's and 11% of Ontario's, were affected by the storm. More than one in ten Quebecers (11%) were subjected to precipitation exceeding 80 mm.
- Over 1,000 power transmission towers were toppled and more than 30,000 wooden utility poles were brought down.
- At the height of the storm, close to 1.4 million customers in Quebec and over 230,000 in Ontario were left without electricity.<sup>2</sup>
- More than 2.6 million people (19% of Canada's labour force) either had difficulty getting to work or were not able to get there at all. About 135,000 of these workers lived in municipalities where power was not fully restored for at least a week.
- Approximately 100,000 people had to take refuge in shelters.
- Nearly 16,000 Armed Forces personnel (almost 11,000 in Quebec and 5,000 in Ontario) assisted with emergency measures and the restoration of the power grid, the largest peace-time deployment of Canadian troops ever.

In comparison, 8,700 Canadian soldiers participated in the Red River flood relief effort in Manitoba in 1997, and about 450 in the Saguenay flood relief operation in Quebec in 1996.

- Soldiers teamed up with workers from 14 utility companies from six provinces and eight American states.
- The Canadian Red Cross Ice Storm relief fund had raised over \$10 million by mid-February 1998.<sup>3</sup>

The map, **Population and Power Failure**, uses census sub-division boundaries and population figures from the 1996 Census. The legend displays the hierarchical classification scheme: the colour red (over 1 week without power) overlays the colour black (urban areas), which in turn overlays the ice-thickness (in shades of blue).

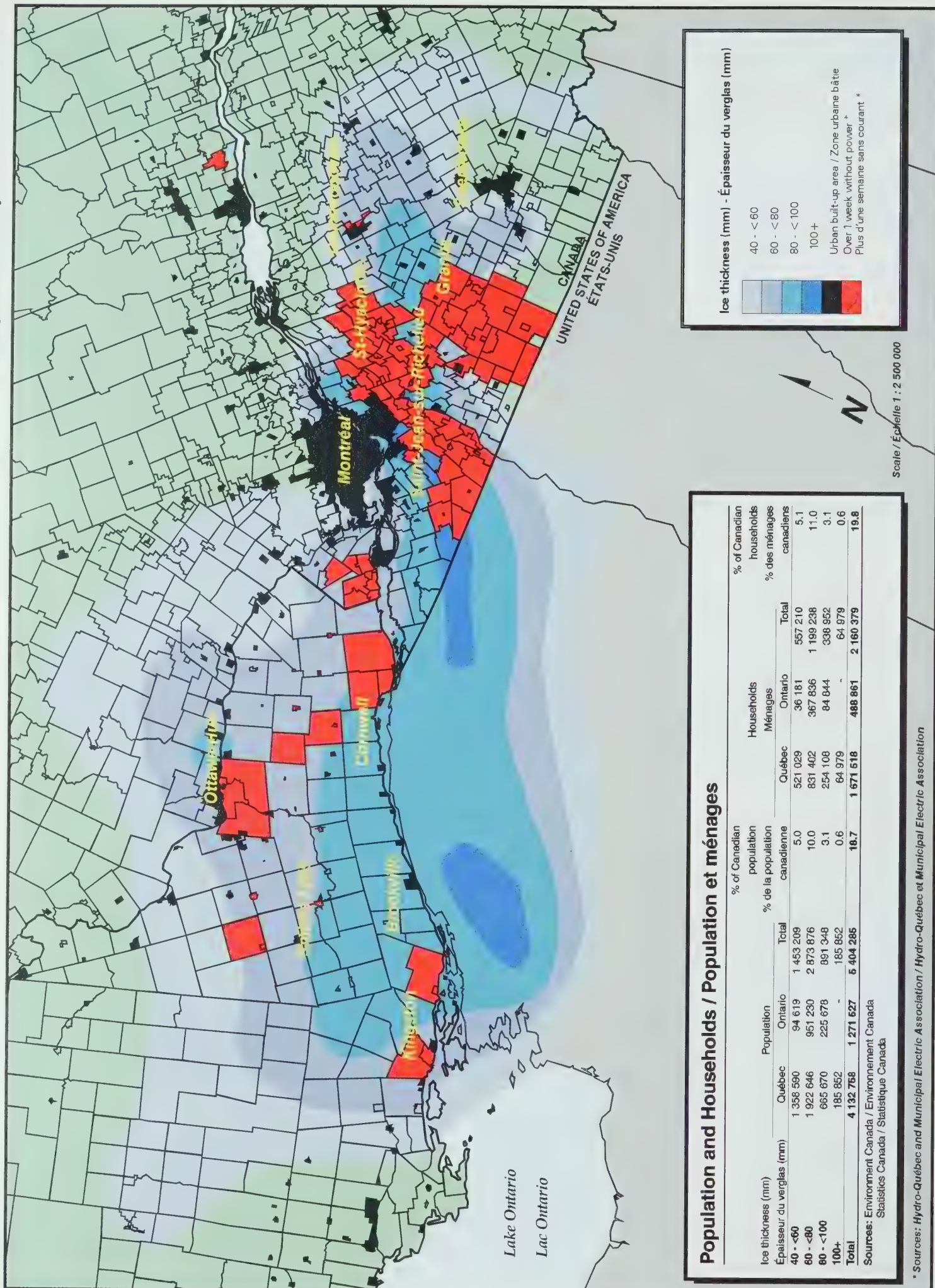
Environment Canada's Atmospheric Environment Service provided the preliminary ice accumulation map, last updated March 4, 1998.

1. In December 1986 in Ottawa and February 1961 in Montreal. David Phillips. Atmospheric Environment Service of Environment Canada. The Worst Storm in Canadian History? [http://www.tor.ec.gc.ca/events/icestorm98/icestorm98\\_the\\_worst\\_e.html](http://www.tor.ec.gc.ca/events/icestorm98/icestorm98_the_worst_e.html).

2. *Canadian Geographic*, March/April 1998, pp. 36-37; David Phillips, *loc. cit.*

3. Compare with \$30 million collected for victims of the Saguenay floods, and \$22 million collected for people affected in the Red River floods. <http://www.redcross.ca>; *CP/Edmonton Journal*, March 17, 1998.









## THE AFTERMATH

- Fifty-seven percent of urban areas in Quebec and 15% in Ontario, accounting for 19% of Canada's total urban space, were subjected to the storm.
- Over one-third (36%) of cropland in Quebec and almost one-quarter (22%) in Ontario were located in the 40 mm accumulation zone. In the worst-hit areas, the ice storm has translated into substantial losses for most farmers.
- Almost 5 million sugar maple taps in Quebec (23% of the total) and 285,000 (25%) in Ontario were located in the affected areas. (Quebec's maple syrup producers account for 70% of the world supply.) The Ontario Maple Syrup Producers Association estimates that it could take 30 to 40 years before production in eastern Ontario is back to normal.
- Nearly one-quarter of all dairy cows (274,000) were located in the affected areas, the majority in Quebec. Dairy farms are thoroughly dependent on mechanized milking, and cows that are not milked regularly become vulnerable to mastitis, an infection of the udder. Dairy cows that survived the power outages may never attain their pre-storm level of productivity.
- Milk processing plants were shut down and over 10 million litres of milk had to be dumped. However, 1.5 million litres were processed in American facilities and returned to Canada for consumption.

- Close to one-third of the 0.7% drop in Gross Domestic Product (from December 1997 to January 1998) was due to downturns in the electric power and construction industries. Some manufacturers benefited directly from the storm, including makers of telephone poles, batteries and specialized electrical equipment.<sup>4</sup>
- As of June 1998, over 600,000 insurance claims totalling over \$1 billion had been filed by Canadian households and businesses.<sup>5</sup>

For more information, see *The St. Lawrence River Valley 1998 Ice Storm: Maps and Facts*, at <http://www.statcan.ca/cgi-bin/downpub/freepub.cgi>.



**François Souldard, Doug Trant, Joe Filoso and Peter Van Wesenbeeck** are analysts with the Environment Statistics Program, Statistics Canada.

4. According to The Conference Board of Canada, the Ice storm resulted in a short-term loss of \$1.6 billion for Canada's economic output, of which \$1.4 billion originated in Quebec and \$200 million in Ontario. Economic losses for Montreal and Ottawa were estimated at \$585 million and \$114 million respectively. The Conference Board of Canada, *Economic Impact of the 1998 Ice Storm*.
5. Kovacs, P. *Now is the Winter of Our Discontent. Perspective*. Insurance Bureau of Canada: 4.2. June 1998.

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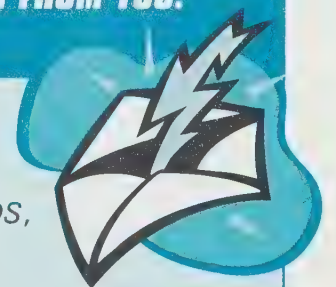
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# Paying Off Student Loans

by Warren Clark

**M**any students expect that postsecondary education will result in better employment and higher earnings. However, to acquire this education, students must find the necessary financial resources. In Canada, paying for postsecondary education has always been a responsibility shared by society through tax dollars, and by parents and children through personal savings. Since 1980, tuition fees have grown by 115%, while average family income has risen by only 1% (after adjusting for inflation). The result is increased pressure on families to find ways to pay for postsecondary education. Government student loans provide one way for young people to invest in their future.

Although student loans provide essential financial help for many, they are not without risk. Much concern has been expressed about student debt levels and whether the growing dependence on loans is creating serious problems for borrowers and for society. Are students defaulting on loans, particularly if they are unable to find well-paying jobs after graduation? Do prospects of heavy debt discourage some students from enrolling in postsecondary programs or cause them to drop out before they reach their educational goals? Another concern is how a high debt load may affect students' post-graduation plans. Do they modify future educational plans, or decisions about buying a home or a car, or starting a family.<sup>1</sup> Using data from the National Graduates Survey of 1995 Graduates (NGS), this article examines the extent of indebtedness, the repayment record and the impact of high debt on postsecondary graduates who used government loans to help finance their studies.

## Employment earnings and student loans are primary sources of funding

When asked how they had financed their education, both college and bachelor's graduates most frequently identified

## CST What you should know about this study

During the summer of 1997, Statistics Canada, in partnership with Human Resources Development Canada (HRDC), interviewed nearly 43,000 people in the National Graduates Survey of 1995 Graduates (NGS). This sample represented over 295,000 Canadian residents who had graduated from trade/vocational, college and university programs during 1995. The survey focussed on the education, training and labour market experiences of these graduates during the two years immediately following graduation. Graduates were also asked about how they financed their education, the extent of any student loans, scholarships, bursaries and if they had difficulties repaying their student loans. In addition, the survey asked about how much graduates owed to government student loan programs at graduation in 1995, and at the time of the interview in June 1997. Graduates were also asked about the amount they owed to other sources.

The results presented in this article are for college graduates (community college and similar institutions) and for graduates of bachelor's degree programs. Undergraduate certificates and diplomas, and first professional degrees (e.g., medicine, dentistry, veterinary medicine and law) are excluded from the bachelor's degree group.

1. Choy, Susan P., Sonya Geis and C. Dennis Carroll. 1997. Early Labor Force Experiences and Debt Burden. National Center for Education Statistics, Report 97-286, Washington, D.C.

employment earnings (59% college, 69% bachelor's) and student loan programs (41% college, 42% bachelor's) as primary sources of funds. Parents ranked a close third for bachelor's graduates. Scholarships, fellowships, prizes, grants and bursaries were rarely identified as a significant source of funding.<sup>2</sup>

### Students from families with lower parental education more likely to borrow

Government student loan programs were designed to allow students of limited financial means to acquire postsecondary education. Student loan eligibility is assessed based on students' living arrangements, education and living costs, and the financial resources available to the student, including parental income and contributions. Using parents' education as a

*1995 grads owed between 130% and 140% more to student loan programs than 1982 graduates.*

proxy for socioeconomic well-being (since parental income is not available from the NGS), it is clear that graduates whose father had not completed high school were more likely to use government student loans than those whose father had a university degree. However, while the use of student loans decreased with parental education, the use of other types of loans (personal loans, loans from relatives, credit cards) increased.

Compared with the class of 1982, college and bachelor's graduates from the class of 1995 owed between 130% and 140% more to government student loan programs at graduation (after adjusting for inflation). On average, the 1995 graduates owed \$9,600 (college) and \$13,300 (bachelor's) when they graduated.

Averages, however, don't tell the complete story. While some borrowers (7% of college and 22% of bachelor's) owed more than \$20,000 at graduation, others (21% of college and 14% of bachelor's) owed less than \$5,000. With these widely varying amounts, graduates face different pressures to find a good job and begin repayments.

2. Scholarships, fellowships, awards and prizes were a much more common way of financing education among first professional (14%), master's (23%) and doctoral (59%) graduates.



## Use of student loans is related to parental education

Education of father <sup>1</sup>	College		Bachelor's	
	% who borrowed from student loans programs	Average amount owed to student loan programs at graduation (\$)	% who borrowed from student loans programs	Average amount owed to student loan programs at graduation (\$)
<b>Total</b>	<b>46</b>	<b>9,600</b>	<b>50</b>	<b>13,300</b>
Less than high school	48	9,600	56	14,600
Completed high school	44	10,000	54	13,500
Some postsecondary	49	9,600	52	13,000
Trade/vocational certificate or diploma	48	9,000	55	12,900
College certificate or diploma	49	8,700	54	12,400
Bachelor's degree	40	9,300	44	12,100
First professional	44 <sup>2</sup>	10,300 <sup>2</sup>	34	13,300
Master's or doctoral degree	38	--	43	11,500
Not reported	53	9,200	48	16,700

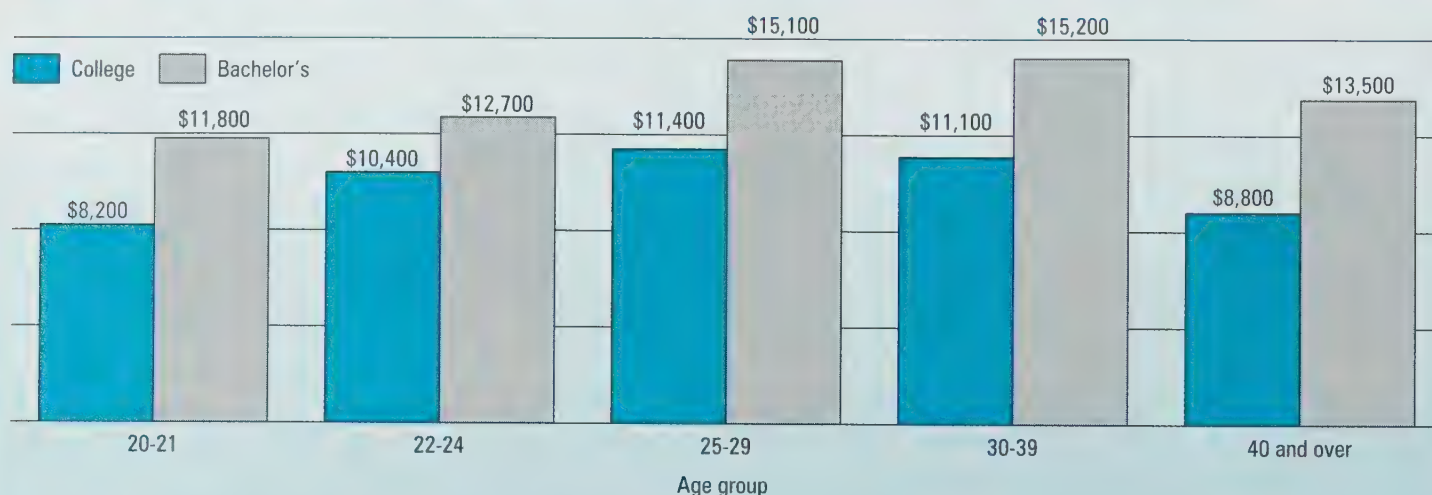
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1. A similar relationship exists between loan use and mother's education.

2. High sampling variability.

Source: Statistics Canada, National Graduates Survey, 1997.





Source: Statistics Canada, National Graduates Survey, 1997.

### The class of 1995 is taking longer to repay student loans

	Year of graduation			
	1982	1986	1990	1995
<b>Average amount owed at graduation (1995 \$)</b>				
College	4,000	6,200	6,700	9,600
Bachelor's	5,800	9,000	9,700	13,300
First professional	9,500	13,700	14,600	21,100
Master's	6,700	8,500	10,000	13,700
Doctorate	5,400	6,900	9,500	12,900
<b>Average amount owed two years after graduation (1997 \$)</b>				
College	--	3,400	4,400	7,700
Bachelor's	--	5,400	7,100	11,000
First professional	--	8,000	10,800	16,600
Master's	--	4,600	6,700	10,000
Doctorate	--	2,700	4,700	7,800
<b>Average reduction in loans between graduation and two years later (%)</b>				
College	--	45	35	19
Bachelor's	--	40	27	17
First professional	--	42	26	21
Master's	--	45	33	27
Doctorate	--	60	50	39

-- Amount too small to be expressed.

Source: Statistics Canada, National Graduates Survey.

Age of graduates also appears to influence borrowing patterns. For example, graduates aged 25 to 29 were more likely to borrow and owed larger amounts than others. While younger graduates may rely on their parents for financial help, many of those over age 30 had a career prior to entry into the program and studied part-time. With help from parents and income from a steady job, both younger and older graduates relied less on government student loans to finance their education.

### Class of 1995 slower at repaying student loans

Borrowers are not required to begin repaying their student loans if they continue studying full-time after they graduate. Although not necessarily full-time, 31% of college and 45% of bachelor's graduates were back in school after their "first" graduation in 1995. It is therefore not surprising that as of June 1997, 17% of college and 23% of bachelor's borrowers were not making payments on their loans. In fact, 11% of college and 16% of bachelor's borrowers owed more two years later than they had at graduation.

Other borrowers don't make payments because they are having financial

difficulty. On average, 1995 college and bachelor's graduates had repaid less in the two years after graduation than had the class of 1990. While 1995 college graduates had repaid only 19% of their loans by 1997, 1990 college graduates had paid off 35% by 1992. Similarly, 1995 bachelor's grads repaid 17% compared with 27% paid off by their 1990 counterparts. This means that 1995 graduates will probably repay their loans over a longer period than previous borrowers. Several reasons may underlie the slower rate of repayment: pursuing further studies after graduation; inability to find a well-paying job; or lower interest rates which may encourage people to pay off their loans more slowly.

#### Will 1995 graduates pay off their student loans?

Although the debt burden of graduates has increased substantially, about 41% of college and 32% of bachelor's graduates had either already paid off their loans or expected

to pay them off before 2001. However, about another 40% did not know when their loans would be repaid in full.

In fact during the two years following graduation, one-sixth of 1995 college and bachelor's borrowers indicated they were already having difficulty making payments on their government student loans. Only about one-third of these borrowers received assistance from government or other lenders, such as the federal government's Interest Relief Program. This program suspends principal payments and assumes graduates' interest payments when their income falls below a specified threshold. As a last resort, graduates may default on their loans. Indeed, some 4% of 1995 borrowers had defaulted by 1997.

The two most significant factors contributing to loan repayment difficulties were the size of the loan and income after graduation. For example, only 8% of bachelor's graduates with a loan of less than \$2,000 had difficulty

## CST Canada Student Loans Program

Human Resources Development Canada estimated that in 1996, the typical living costs for an eight-month college or university program were between \$10,000 and \$13,000 for students living away from home, and between \$3,400 and \$6,400 for students living at home with their parents. Based on these estimates, the cost of a four-year program can exceed \$50,000 for someone living away from home and \$25,000 for a student living at home.<sup>1</sup>

The Canada Student Loans Program (CSLP) allows eligible Canadian citizens and permanent residents to finance their postsecondary education with government-sponsored loans.<sup>2</sup> Full-time students in a program lasting at least 12 weeks may qualify for a loan based on the costs of their program and on the financial resources available to them. For 1997-98, the CSLP provided funding to meet 60% of a student's assessed need for the period of enrolment (up to a maximum of \$165 per week). Part-time students may also qualify for a loan if their family income is below a specified threshold (based on the number of people in the family). The CSLP can be supplemented with provincial student loan programs.

The 1998 federal budget introduced several improvements to the Canada Student Loans Program. Under the CSLP, the government pays interest on the loan while the borrower is in school. Interest accrues after graduation, but payments are not required for six months; after this grace period,

the borrower is responsible for paying off the loan, usually over the next 9 1/2 years. For those facing financial difficulties, the federal government may pay the interest for a maximum of 30 months after the borrower has left school (extended from 18 months); also during this time, the borrower need not make payments on the principal.

The 1998 budget also introduced a 17% federal tax credit on the interest portion of payments for both federal and provincial student loans. Income thresholds for interest relief were raised, and in 1999, partial interest relief will be available for those with higher incomes. For borrowers who have used all of their interest relief, the loan repayment schedule may be extended to 15 years and interest relief to 54 months. For those who still have financial difficulty at least five years after their studies, the government may reduce the loan principal if payments exceed a certain percentage of income.<sup>3</sup>

1. Human Resources Development Canada. "The costs of post-secondary education." [http://www.hrdc-drhc.gc.ca/student\\_loans/engraph/content/cost.html](http://www.hrdc-drhc.gc.ca/student_loans/engraph/content/cost.html).

2. Quebec and the Northwest Territories operate their own student assistance plans and receive other payments from the federal government.

3. Finance Canada. "Budget 1998 – Building Canada for the 21st Century – The Canadian Opportunities Strategy: Helping Manage Student Debt." Ottawa. [http://www.fin.gc.ca/budget\\_98/pamphe/studpae.html](http://www.fin.gc.ca/budget_98/pamphe/studpae.html).



repaying, compared with 34% of those with loans of \$30,000 or more. Similarly, those with incomes below \$30,000 had nearly three times as much difficulty repaying their loan as graduates with incomes over \$50,000 (21% versus 8%).

Stable employment also played a significant role in repaying loans. Not surprisingly, those with longer term jobs were less likely to find making repayments difficult. While 19% of those who had been in their job for less than six months as of June 1997 had difficulty repaying, this was true for only 12% of those who had held their job for two or three years. However, bachelor's borrowers who had job tenure beyond three years were equally likely to have loan repayment difficulties as borrowers with less than 6 months in the same job (19%). Not surprisingly, unemployed borrowers had

more difficulty repaying their student loans than those working full-time; one-quarter of unemployed borrowers versus one-sixth of borrowers working full-time had difficulty repaying.

### **Women university graduates had more trouble repaying student loans**

Women were more likely than men to experience difficulties repaying their loans. At the bachelor's level, 20% of women experienced difficulties compared with 15% of men. This discrepancy may be due to the fact that women borrowed, on average, about \$1,000 more than men and that their incomes were approximately \$3,700 less than men's in 1996. In contrast, women and men who graduated from college experienced only marginal differences in repayment difficulties.

Difficulty in repaying loans varied from province to province. In New Brunswick and Newfoundland, 23% of bachelor's graduates reported having trouble paying down their loans. In contrast, bachelor's graduates from Quebec, where undergraduate tuition fees were the lowest in the country, were least likely to report difficulties (14%). Quebec graduates also had one of the lowest debt levels at graduation (\$11,600 in student loans) while those in Saskatchewan had the highest (\$16,200).

### **Summary**

The class of 1995 borrowed more from student loan programs than any group of graduates in the previous 15 years. Because their earnings did not keep pace with these increasingly large loans, many graduates experienced repayment difficulties. Within two years of graduation, one in 20 borrowers ended up defaulting on their loan. Yet for every member of the class of 1995 who had defaulted, there were five or six who had repaid their loan within two years of graduation.

## **CST Student loans in the United States**

As in Canada, tuition in the United States has increased much more quickly than family incomes. Between 1980-81 and 1995-96, tuition fees climbed by more than 90%, while family incomes grew only 9% after accounting for inflation.<sup>1</sup> In 1995-96, 60% of graduates in American bachelor's programs had borrowed an average \$18,200 (Canadian dollars)<sup>2</sup> to finance their education. Among associate degree recipients (similar to Canadian community college graduates), 42% had borrowed an average of \$6,900 (Canadian dollars).<sup>3</sup>

In addition to student loans, about 10% of parents of graduates in 1995-96 borrowed from the U.S. Department of Education's PLUS program to help finance their children's education. Another study conducted by the University of Michigan indicated that 21% of borrowers using home equity lines of credit used some or all of those loans to finance education compared with 7% of borrowers using traditional equity loans.

1. The College Board. 1997. *Trends in Student Aid: 1987 to 1997*, Washington, D.C.
2. Canadian dollars were calculated based on the May 1996 exchange rate of \$1.369 CDN = \$1 U.S.
3. United States General Accounting Office. "Students have increased borrowing and working to help pay higher tuition fees." Washington, D.C., GAO/HEHS-98-63, p.6.

**CST**

**Warren Clark** is an analyst with *Canadian Social Trends*.

# SOCIAL INDICATORS

	1990	1991	1992	1993	1994	1995	1996	1997	1998
<b>POPULATION</b>									
<i>Total population (July 1)</i>	27,790,590	28,120,065	28,542,210	28,946,770	29,255,600	29,617,450	29,969,210	30,286,600	—
Age 0-17	6,895,450	6,968,880	7,039,275	7,095,740	7,132,750	7,169,335	7,198,080	7,216,280	—
Age 18-64	17,778,180	17,940,170	18,201,870	18,461,905	18,650,630	18,889,955	19,127,410	19,344,485	—
Age 65 and over	3,116,965	3,211,015	3,301,070	3,389,120	3,472,220	3,558,160	3,643,715	3,725,835	—
Child dependency ratio (0-17)	0.388	0.388	0.387	0.384	0.382	0.380	0.376	0.373	—
Aged dependency ratio (65+)	0.175	0.179	0.181	0.184	0.186	0.188	0.190	0.193	—
<i>Population rates (per 1,000)</i>									
Total growth	13.9	13.2	14.1	12.3	12.3	11.9	10.7	—	—
Birth	14.6	14.3	14.0	13.4	13.2	12.8	12.2	—	—
Death	6.9	7.0	6.9	7.1	7.1	7.1	7.1	—	—
Natural increase	7.7	7.4	7.1	6.3	6.1	5.6	5.0	—	—
Immigration	7.7	8.2	8.9	8.8	7.7	7.2	7.5	7.1	—
Emigration	1.4	1.7	1.6	1.5	1.6	1.6	1.6	—	—
Interprovincial migration	12.0	11.2	10.8	9.8	9.8	9.7	10.5	—	—
Marriage	6.8	6.1	5.8	5.5	5.5	5.4	5.2	—	—
<i>Percent growth in largest Census Metropolitan Areas (to July 1)</i>									
Toronto	1.6	0.9	2.0	2.0	1.4	2.1	2.3	1.5	—
Montreal	0.9	0.6	1.2	1.2	0.6	0.8	0.7	0.8	—
Vancouver	2.5	2.2	2.6	2.6	2.6	3.0	3.2	1.9	—
<b>HEALTH</b>									
Total fertility per women	1.66	1.70	1.69	1.69	1.65	1.64	1.59	—	—
Teenage pregnancy	45,639	45,553	46,221	46,376	47,376	45,044	—	—	—
Rate per 1,000 women 10-19	24.4	24.3	24.5	24.3	24.6	23.1	—	—	—
% of low birth-weight babies	5.4	5.5	5.5	5.7	5.8	5.9	5.9	—	—
Infant mortality (per 1,000 live births)	6.8	6.4	6.1	6.3	6.3	6.1	5.6	—	—
<i>Life expectancy (years)</i>									
Men	—	74.6	74.8	74.9	75.1	75.4	75.7	—	—
Women	—	81.0	81.0	81.0	81.1	81.3	81.4	—	—
<i>Leading causes of death for men (per 100,000 persons)*</i>									
Cancer	246.6	247.5	244.0	241.0	239.0	234.9	231.3	—	—
Lung	79.6	78.8	77.3	77.3	74.7	72.1	71.5	—	—
Colorectal	25.7	25.1	25.9	24.5	24.7	24.7	24.0	—	—
Prostate	30.1	31.2	30.9	30.8	30.3	30.3	30.9	—	—
Heart diseases	269.1	263.7	256.8	255.9	244.8	239.2	232.5	—	—
Cerebrovascular diseases	58.2	55.8	54.3	56.2	54.3	53.6	51.1	—	—
External causes**	69.1	68.7	66.9	67.4	64.9	65.0	63.0	—	—
<i>Leading causes of death for women (per 100,000 persons)*</i>									
Cancer	153.1	153.7	152.7	154.0	153.9	150.4	153.0	—	—
Lung	27.6	29.6	29.6	31.6	31.7	31.1	33.3	—	—
Colorectal	17.7	16.8	16.6	16.5	15.9	16.0	15.5	—	—
Breast	31.3	30.1	30.4	29.2	29.8	28.4	28.6	—	—
Heart diseases	150.1	147.6	140.8	140.4	137.9	134.9	131.7	—	—
Cerebrovascular diseases	46.8	46.3	46.1	47.3	45.2	44.0	43.1	—	—
External causes**	26.5	26.5	25.7	26.6	25.0	25.4	25.1	—	—

— Data not available.

\* Age-standardized to 1991 population.

\*\* Includes events such as suicide, poisoning, and motor vehicle and other types of accidents.



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## Lesson plan for "Paying Off Student Loans"

### Objectives

- ☐ To help students plan financing postsecondary education.
- ☐ To understand how loan repayments work.

### Method

1. Acquiring postsecondary education involves many costs, not just tuition expenses. Have the students discuss what expenses they may incur while attending a university or college during an 8-month study period.
2. Have the students build a spreadsheet, listing the categories of expenses in the left hand column. In the second column estimate the costs they might incur in each expense category if they were to live at home while attending university or college. In the third column estimate what these costs would be if they lived away from home. Add up these columns to estimate the total costs of an 8-month study period.

Various sources can be used to estimate expenses. Your local newspaper may have ads for student rooms or apartments for rent, many universities have web sites indicating tuition fees, residence fees and meal plan costs, or the school library or guidance office may have university or college calendars indicating the costs of attending their institution. Parents may help students estimate the cost of food.

3. Now, have the students estimate the resources they have available to pay for their education, e.g., savings from summer jobs, earnings from part-time jobs while studying or parental support. Itemize the sources of income and their amounts in another part of the spreadsheet.
4. Calculate the difference between total expenses and total resources available for education. If costs exceed resources, the student may need to reassess the costs, or find additional sources of financial aid. Estimate how much the student may need to borrow over the duration of the educational program. The Canada Student Loans Program and provincial student loans programs may provide funding. Check out Human Resources Development Canada's web site to find the terms and conditions of eligibility for Canada Student Loans.
5. After completing studies, students must begin repaying government student loans before the end of the 7th month after graduation. Canada Student Loans carries a maximum fixed interest rate of the prime rate + 5% or a maximum floating rate of the prime rate + 2½%. Provincial student loans have different interest rates varying from province to province. Calculate monthly payments if the interest rate was the prime rate + 2½% and loans were repaid over a 5-year period. Recalculate monthly payments with a 10-year repayment period. (The prime interest rate can be found in your daily newspaper). The following formula can be used or students may wish to refer to loan calculators available at many financial institutions' web sites.

$$\text{Monthly Payment } M = \frac{P \cdot J}{1 - (1 + J)^{-N}}$$

where P = principal

N = number of months over which the loan is amortized

J = monthly interest rate in decimal form (i.e.,  $I/(12 \cdot 100)$ ). For example, an annual interest rate of  $I = 10\%$  means that  $J = 10/1200 = 0.0083333$ .

#### EXAMPLE OF CALCULATING MONTHLY LOAN REPAYMENTS

What would the monthly payments be to repay a loan of \$30,000 at 10% interest over 15 years.

Student loan principal P = \$30,000

Annual interest rate I = 10%

Repayment period = 15 years. Number of repayment periods N = 15 years \* 12 months = 180.

Monthly payments  $M = \frac{30000 \cdot 0.0083333}{1 - (1 + 0.0083333)^{-180}} = \$322.38$

Over 15 years, 180 monthly payments would be made amounting to just over \$58,000 in payments.

This means that \$28,000 in interest was paid to repay the \$30,000 loan.

6. Have the students discuss how they would handle making repayments and what hardships they may experience.

### Using other resources

- ☐ Visit Human Resources Development Canada's website to get an estimate of the amount of Canada student loans you may be eligible to receive using the Student Need Assessment Software (SNAS). [http://www.hrdc-drhc.gc.ca/student\\_loans/engraph/content/fmuch.html](http://www.hrdc-drhc.gc.ca/student_loans/engraph/content/fmuch.html).
- ☐ Details about provincial student loans programs can be obtained from links at the SchoolNet web site: <http://nrg.schoolnet.ca>.

### Share your ideas!

Do you have lessons using CST that you would like to share with other educators? Send us your ideas and we will ship you lessons using CST received from other educators. For further information, contact Joel Yan, Dissemination Division, Statistics Canada, Ottawa K1A 0T6, 1-800-465-1222; fax: (613)-951-4513 or Internet e-mail: [yanjoel@statcan.ca](mailto:yanjoel@statcan.ca).

### EDUCATORS

You may photocopy *Educators' Notebook* and any item or article in *Canadian Social Trends* for use in your classroom.

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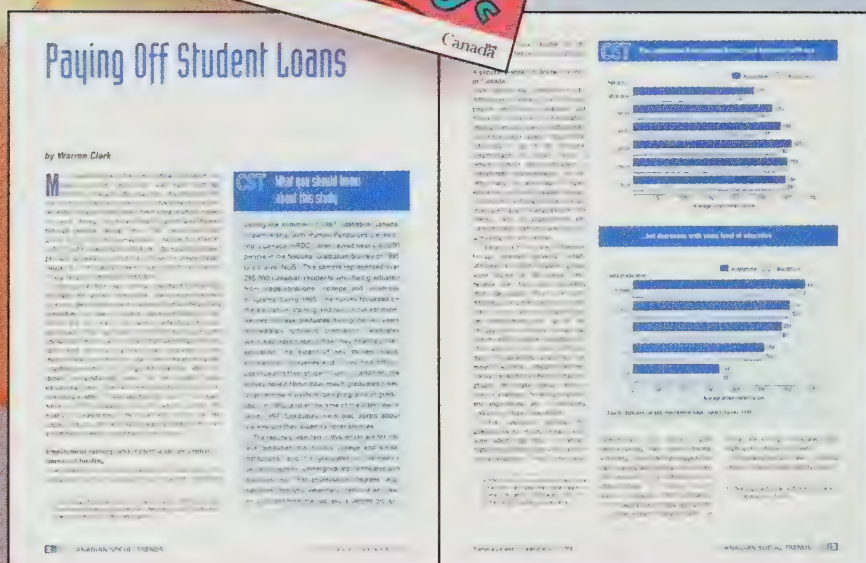
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